

THE MEDICAL AND SURGICAL REPORTER.

No. 2024.

SATURDAY, DECEMBER 21, 1895.

VOL. LXXIII—No. 25

ORIGINAL ARTICLES.

SEXUAL CRIMES BY INEBRIATES.*

T. D. CROTHERS, M. D.,† HARTFORD, CT.

The mental condition of inebriates who commit sexual crime has received but little attention. All intimations of the possible insanity of the perpetrator of such crime is covered up by the public indignation and contempt for the inebriate. The impression prevails that inebriety is an aggravation of such crimes, requiring more prompt and summary punishment.

The two classes commonly observed are first, those who while under the influence of alcohol commit rapes on children or old women, or any woman indiscriminately, apparently governed by favorable opportunity, and rarely showing any discretion as to the person. Some of these acts display cunning and reasoning to conceal the motive from the victim, and then to cover up the consequence and avoid exposure. Rapes, abductions, strange and unusual sexual perversions that are startling in their bestiality, are not uncommon. Some of these cases, when intoxicated, display in conversation a delirium of the lowest

sexual impulses, which seem only to need opportunity to materialize into most brutal crimes.

The second class of cases are usually periodical inebriates who, while the drink paroxysm continues, associate with most degraded women in the lowest places, and become involved in sexual intrigues and crimes. Or they commit bigamy and marry any one who will consent to live with them. Cases of this class are often seen in the courts, and rarely is the real mental condition recognized.

Of the first class the following are common cases: A rape is committed on a young woman in a specially violent manner by an inebriate, who drags her away to a secluded place and leaves her unconscious; an old woman who shows kindness to an inebriate is violated and seriously injured; a child is lured away and violated, then killed. In the South, negroes of this class who commit rapes, often kill their victims or leave them supposed to be dead. Some of the most atrocious crimes of this character are so clearly the work of insane minds that there should be no question or

*Superintendent Walnut Lodge Hospital.

†Read at the annual meeting of the Association for the study and cure of inebriety at New York City, Dec. 4, 1895.

doubt of it. The fury of the sexual impulse merges into homicide and becomes a wild delirious mania beyond all control.

An inebriate who came from drinking, degenerate ancestors, and who was a quiet, reputable man when sober, was convicted of rape and murder and was hung. It appeared in his history that when sixteen years of age he visited a house of prostitution and remained intoxicated in this place for two days. From this time on, he drank paroxysmally with free intervals of from three months to two years' duration. During these free intervals he worked steadily, was industrious and moral; when the drink craze came on he consorted with the lowest women, and was insane in his sexual impulses. He wanted to have intercourse with every woman he saw, and when his money was exhausted, resistance to his impulses resulted in quarrels and altercations. After a time this impulse died out, and extreme repugnance and penitence followed. The crime he committed followed his expulsion from a low place where he had been drinking a short time, and occurred while tramping to another village. He killed his victim, who probably resisted him, then continued his journey, and was found next day in a house of prostitution. He seemed not to have any clear idea of the act, and, when he became sober, welcomed death. It did not occur to the court that this man was a sexual maniac, and that the crime was foreshadowed by his conduct every time he drank for years before.

A case which created intense feeling in the public mind was that of an inebriate who outraged his daughter, and otherwise injured her, so that she died. He was convicted and hung as a monster of vice. The facts of his history showed that he was a kind, generous man, when sober, but under the influence of alcohol he suffered from sexual delirium. He would demand continuous intercourse with his wife until she became exhausted, then he would find some woman to take her place. The only relief was to urge him to drink and keep him stupid for a few days when this delirium died out. When he recovered only a dim recollection remained of his conduct. He was courteous

in the free interval, treated his wife and family very kindly, and, except a certain increasing failure of mind, seemed in no way different from others. He came from inebriate ancestors, and was a skilled mechanic who was more than usually prosperous, were it not for the drink paroxysms.

In a third case, where a similar crime ended in the death of the victim and the execution of the perpetrator, the following facts were brought out: His father was an inebriate, and his mother a pauper. He had epileptic paroxysms from 15 to 20 years of age, when they merged into drink periods, during which he remained stupid from spirits for days, then recovered. After partial recovery from the drink craze, he became a sexual maniac. He would spend several days in houses of prostitution, consorting with every one, until he became exhausted and was driven out. Then a period of sobriety followed with intense active labor as a huckster. During this time he was honest, moral and most energetic, and apparently ambitious to get along and make money. For ten years these drink attacks, coming on twice or three times a year, always began and ended in the same way. First intense narcotism and stupor, then diminished drinking and sexual delirium, with exhaustion and recovery. No notice was taken of the possible mental derangement of this case at the trial.

These crimes are remarkable for their similarity of act and of conditions. Rapes and sexual wrongs are committed in a wild maniacal way, and when associated with murder, are particularly brutal and unreasoning. In a record of five cases of negroes who committed rape and were hung by mobs, four of them were inebriates and had been drinking excessively before the act. The fifth was known to have sexual mania at times, and to rush away to consort with low women for a week or more, then return quiet and rational. In two recent cases crimes of this character were associated with the murder of the victims—two little girls. In one a defense of insanity was urged. A defective insane ancestry was proven, and periodical drinking. The fact that his drinking was not prominent in stupor or delirium, was considered as evidence

of its wilful character. He was finally hung.

In the second case no medical study of the case appeared in court. His bad ancestry and excessive drinking, at times, with sexual excesses, came out prominently in the trial but was considered an aggravation of the offense rather than otherwise. He, also, was hung, but the facts clearly indicated insanity of the type we are considering.

Examples of the second class of sexual crimes, committed while the mind is dethroned by alcohol: Persons of previously good character become inebrates and, at intervals, drink to excess, desert their families and associate with fast women for a period, then return and live reputable lives for a time. These paroxysms of drink and sexual excess grow more frequent and prolonged. Intrigue, dishonesty, crime and wrongs follow. Divorces, strange unreasonable wills, legal complications and complex questions come into court for settlement. Some of these cases commit bigamy. In one instance an inebrate had married four women in five years. Each time he was suffering from a drink paroxysm, and with maniacal cunning concealed his name and identity. He married disreputable women and, when he recovered from the drink craze, deserted them. In these cases the same sexual mania prevails, only it takes on this form of marrying. Some of these cases are marked with many and varied sexual perversions, which are known only to the physician, and but rarely come into legal recognition. *Kraft-Ebing and von Schrenck-Notzing* have written, each, large works on *Psychopathia Sexualis*, which give many examples of cases which are associated with inebrity, and also some to be caused by it.

In these cases the questions of mental soundness, of capacity to have done otherwise, or the knowledge of the nature and consequences of the act, and of power of restraint, must be decided from a study of the history of the criminal. The crime may be, and often is, but the culmination of a series of acts, which could have been predicted and prevented long before. Thus in a case of inebrity during the drink period, where sexual exaltation and irritation is prominent, it is almost absolutely

certain that this condition will increase and become a wild, ungovernable mania after a time. Then a combination of favorable circumstances will end in crime with equal certainty. The low, degenerating brain of the negro, palsied by spirits, is dominated by the sexual impulse, which demands relief, and overcomes all opposition by force, even to crime. The exhausted business man, who has drank spirits in so-called moderation up to a certain point, then develops a sexual delirium that ends in crime, is a maniac. The man who has lived a reputable life up to a certain point, then becomes an excessive user of spirits, with a mania for sexual acts, is very likely to commit crime from the slightest exciting causes. Such a case was recently hung.

The man, at fifty, whose former life had been above suspicion, began to drink to excess, and after seducing a number of women, killed one who began suit for damages against him.

A clergyman who suddenly became an inebrate, poisoned a woman who was his mistress, under the most aggravating circumstances. He was executed, and no effort was made to determine his mental condition.

The tramp who commits sexual crime, is unrecognized in court except as wilful and dangerous, and yet the very fact of his nomadic living is evidence of his degeneration and unsoundness. If a history of inebrity is found associated in such a case, the irresponsibility is beyond question. The capacity to act sanely and to judge of the consequences of his acts, is practically obliterated.

The reckless, fast man, who drinks steadily and who lives on the borders of social anarchy and in violation of all laws of healthy life, is prepared to commit crime, along sexual or other lines. Crime is the natural outcome and sequel of his life and conduct.

Women inebrates rarely commit sexual crimes, although, often, they are accessories.

The symptomatic delusion of infidelity, and sexual deceit and fraud, so common in inebrates, often leads to crime.

Associated with this is usually a degree of dementia that can be ascertained. In the inebrate who, ap-

parently not intoxicated, plans and commits some sexual crime, there is a reasoning mania which has some central origin or starting point in the brain. Where the crime is sudden and unexpected, it belongs to the impulsive epileptoid class.

In the first case, after the sexual impulse has expended itself, an impulsive, delusive desire seizes the mind to cover up the crime and its consequences.

The childish efforts for concealment clearly mark the demented mind. After a rape and crime, the body will be placed where it can be readily found, or subjected to rude efforts to destroy by fire, or by burial.

The character of the act, and the vague consciousness of it, manifest in the unskilled concealment and in efforts to escape, with denials that reveal the true conditions, are all symptoms that are unmistakable. The drink history will usually show a stage of continuous drinking and stupor, at intervals, or a delirious wakefulness with sexual disturbances, such as lewd talk, vile words, and boasting of virile power.

The cases in which such crimes are committed with overmastering impulse, resemble paroxysms of concealed epilepsy. They belong to the epiplasine neuroses, so often seen in insane asylums.

In a case under my care, the alcoholic paroxysm after a certain period provoked the most ungovernable sexual impulse. After gratification was a feeling of disgust which, at times, became homicidal, with an intense desire to injure and destroy the victim or person which he used to satiate his appetite. This was resisted with great difficulty several times. He became alarmed and urged his physician to narcotize him at the next drink craze. This was done with opium, and he became an opium taker. The sexual impulse changed and finally died out. In this case crime would have followed had no relief came.

In another case brought to my attention a periodical inebriate who suffered from sexual manias after the drink paroxysms committed suicide to prevent crime which he feared he could not resist.

In all probability the mania for sexual gratification is due to some central

lesion of the brain, and follows a uniform course of degeneration, homicidal manias, dementias and suicide are all stages or symptoms of the same disturbance.

The palsy from alcohol may be central or diffused, or both, and manias of varied and complex character follow.

The sexual mania is always evidence of degeneration and failure of brain power and control, and where associated with the drink thirst, or delusions of fear, sense exaltations or depressions is clearly symptomatic of mental disease. Some of these cases of sexual crime following or associated with excessive use of spirits, are paretics. Long residence in prison brings out prominent symptoms.

A man lately hung for murdering his mistress had delusions of grandeur in jail. Before death, and on the scaffold he displayed delirious exaltations. He died in a wild delirium that was mistaken for penitence and spiritual attainment.

In a noted ease the criminal who committed bigamy was temperate and reputable up to fifty years of age. He began to use spirits to excess and associate with low women, neglected his family, spent much time traveling round the country with strange women. Finally he was arrested and sentenced to ten years imprisonment. His property was involved in the bad debts contracted and his family was impoverished. General paralysis was diagnosed and he died in prison.

A careful medical study of his case would have revealed the true condition long before crime was committed.

Another case was the subject of much comment. A farmer with a large family, man of good reputation and some wealth, while returning from the city outraged a strange woman at a secluded part of the road and left her supposed to be dead. He narrowly escaped being lynched, and was finally sent to state prison for life. He died within a year, and the statement was made that death was from a broken heart and sorrow at the crime he had committed. The real facts were, that for ten years before the crime he had drank spirits at intervals of three or four months to intoxication. His drinking dated from shock at the proximity to

a stroke of lightning which made him unconscious. His health had declined from this time, and at times he had manifested a maniacal sexual impulse, particularly after drinking. So intense was this that he became a masturbator. For days after, and during the drink craze he warned his wife and daughters to keep out of his sight for fear he might do something terrible. This passed over and he became temperate and was mild and affectionate in his manner. An early recognition and medical care of this case would have prevented a crime.

Strange infatuations are often noted in men of character and reputation, particularly for women that seem not to possess any particular traits of character. This infatuation often leads up to crime, and is practically a mania that starts from several centers and grows to be an overwhelming impulse that even gratification cannot satisfy. This is not recognized as mania, and its unreasonableness grows more intense, until at length it ends in violence. In the court room the desertion of his family and the neglect of his business, the disregard of his reputation and maniacal craze to be with a certain woman, come out. His former drinking habits seem to increase the idea of malice, and severe punishment follows.

The physiological significance of this conduct, the real meaning of this infatuation never appears to be other than wilful neglect and wantonness.

Many of these cases do not go as far as crime, but stop short of it. But legal questions and complications follow frequently, and the real mental state is covered up and escapes notice.

If the mania was recognized, and the legal measures of treatment used were based on this state, more exact justice would follow.

Some of the facts found in these cases may be stated as follows:

1. The use of alcohol on the brain centers, by paralyzing and disturbing their harmonious action, is most likely to be followed by manias and delusions.

2. The several nerve centers may suffer by irritation and exaltation, or depression and paralysis.

3. In the former case, they dominate all other centers, and either act explosively or by continuous irritation and demand for relief.

4. The fact of using spirits, coupled with wild sexual conduct, is strong evidence of mental weakness and disease.

5. Sexual crime in an inebriate is always some form of insanity. The want of control, and the absence of rational judgment of the effect of the act and the consequence from it, are usually very clear in every case.

6. Reasoning and cunning to conceal the crime never implies sanity by itself, or preparation to commit the crime; both are the workings of an abnormal mind, dominated by a morbid impulse.

7. Acts of any kind showing these impulses, or in a case of sexual mania, are open to question, unless they are rational and along lines of reasonable motive and conduct.

8. The explosive character of sexual crime, at its final culmination after a series of acts that lead up to it, should always receive the closest medical study.

9. Sexual crime and questions of legal dispute among inebriates should receive careful medical study before they come into court, and the facts of the crime and criminal be brought out clearly before any legal decision of the final disposition of the case be made.

In a recent lecture, Willis L. Moore, the new chief of the Government Weather Bureau, spoke on the importance of studying the soil as well as the air in forecasting frosts. The introduction of this feature added greatly to the efficiency of the predictions of the Wisconsin bureau, when he was in charge of that. This State is noted for its cranberry beds, to which great damage is caused by early frosts. Often there were destructive frosts when the town temperature did not go below 42°. The frost, depends, of course, upon the lowering of the temperature of the soil. If it is dry and porous, it gives out its heat readily; if it is wet it has much of water stability of temperature. A half inch of rain evenly distributed is enough to counteract many early frost nips.—
Pub. Opinion.

ACUTE GASTRITIS.*

A. L. BENEDICT, A. M., M. D., BUFFALO, N. Y.†

It is theoretically objectionable to use the word *acute* in a restricted sense, as indicating a higher grade of inflammation than that understood from the use of the word in regard to catarrhal inflammation of others. Practically however, the stomach is susceptible to a high grade of inflammation, to which other internal organs are scarcely liable. Occasionally the vagina, rectum, urethra, or the openings of the face are inflamed and eroded by the careless or criminal — including suicidal — use of caustic agencies. It is said that one of the kings of England was put to death by the introduction of hot irons through the anus, on account of superstitious fear of inflicting any mutilating violence on his person. Occasionally, the upper air passages or even the lungs are violently inflamed by inhalations of steam, but barring almost immediately fatal accidents, substances that are strongly irritant, either through chemical properties or heat, do not affect the internal organs except as they are swallowed. Of all parts of the digestive apparatus, the stomach is the one which is pre-eminently exposed to serious lesion. The mouth and oesophagus have usually, only a momentary contact with the irritant, being almost immediately soothed by a draft of liquid. The intestine, the liver the urinary organs may be inflamed but by a very dilute solution of the irritant. Thus, there is a practical necessity for distinguishing between an ordinarily severe idiopathic catarrh and the violent injury inflicted by a corrosive agent.

The consideration of *acute gastritis*, therefore, involves the discussion of corrosive poisoning. Without going into details that must be evident to the careful reader of any text-book on general practice or toxicology, some matters remain for discussion in the light of modern advancement of medical science and

art. The diagnosis of the exact poison used is a matter of great importance, and, strange as it may seem, it rests almost entirely on information furnished by the patient or his friends, and upon the confirmatory evidence supplied by inspection of the remnants of poison, of the labels of boxes and bottles, and by reference to prescriptions and druggists' memoranda. The diagnosis between the various poisons by the symptoms and signs is extremely difficult and uncertain unless the case is too far advanced for medical aid. The stains of the various mineral acids, the color of some metallic salts, the glow of phosphorus, are much more conspicuous and significant in text-book descriptions than in actual practice. In short, the successful treatment of poisoning depends more upon the shrewdness of a detective than the careful methods of the chemist and pathologist.

The treatment of poisoning may be summed up as follows:

1. Render the poison insoluble if possible, or decompose it into harmless derivatives.
2. Evacuate the stomach unless the first indication can be absolutely fulfilled or unless the mechanical danger of this process is greater than the danger from the presence of the poison.

3. Protect the alimentary tract by demulcents if the poison is corrosive, but beware of demulcents that may interfere with the precipitation of the poison.

4. Support the vital forces.

5. Aid elimination through the various emunctories, and guard the various channels of elimination against chemical and mechanical injury.

6. Attend to whatever organic changes the poison may have produced in the blood and solid tissues of the body.

The ability to fulfill the first indication depends upon chemical knowledge and upon ingenuity in preparing antidotes extemporaneously.

If there is any unavoidable delay in precipitating the poison, attention should

*Read before the Buffalo Academy of Medicine.

†Lecturer on Diseases of the Digestive Organs, Dental Department, University of Buffalo.

be turned immediately to the second indication. The writer believes that better practice would result if students were thoroughly taught the use of two simple emetics, the finger in the throat and the hypodermic tablet of apomorphine. Mustard and mineral emetics should be avoided in the care of a stomach already eroded by a powerful irritant. An apparent exception exists in the use of zinc or copper sulphate in the treatment of phosphorus poisoning, but here the indication is rather to precipitate the phosphorus than to evacuate the stomach.

A colleague of the writer and he himself, were among the very first to show that apomorphine was efficient in the treatment of poisoning by morphine and other narcotics. It is true that deep narcosis will prevent the reflex from irritation of the fauces or from the central effect of apomorphine, but, so, too, will direct emetics probably fail in the same condition, and, if so, their use has simply added to the poisonous contents of the stomach. Constitutional depression alone may prevent the action of an emetic. Some time ago, the writer had under treatment a patient who refused to have the stomach contents removed by the tube, but who volunteered to take an emetic so that the chemical examination could be made. Five milligrams of apomorphine were given without producing the least effect and, after a few minutes, an attempt was made to provoke reflex vomiting from irritation of the fauces. The finger was introduced into the pharynx even to the entrance to the oesophagus, and palpation was practiced of the naso-pharynx and of the posterior part of the larynx, without the least effect in the desired direction. If such a person were to take poison it would be folly to run through the list of emetic drugs, but the use of the stomach tube would become imperative.

There is a decided prejudice against the use of the tube in corrosive poisoning on account of the dread of rupture of the stomach. The writer can not comprehend why the use of the tube is more dangerous than the evacuation of the stomach by an emetic. Surely, the danger of poking a hole through even an eroded stomach is insignificant, and it is inconceivable that there should be a greater reflex spasm and increase of

intra-gastric pressure from the irritation of the tube than from retching and vomiting otherwise excited. In a person who happened to be accustomed to the passage of the tube, the evacuation of the stomach in this way would seem preferable, as involving less strain. Some consideration must, however, be given to the fact that greater blame would attach itself to the physician who was so unfortunate as to have the stomach rupture during the use of the siphon, than if the same accident happened after the administration of an emetic drug. There is, furthermore, a very practical objection to the use of the stomach tube in many instances, namely, that large pieces of food pass with difficulty through even the largest sized siphon. This objection diminishes in force as the time after a meal is longer, and as the food is more carefully masticated. The proper tube for use in cases of poisoning is a No. 12, soft rubber; one with square cut, instead of catheter-shaped internal end.

The third indication to be met in the treatment of corrosive poisoning constitutes the attention to the gastric lesion. In the choice of demulcents, oil should not be used after phosphorus, and, in general, a preference should be shown to "dry dressings" such as bismuth sub-carbonate. Salol, unless salicylic or carbolic radicles are already present to an excessive degree, is an excellent antiseptic. If there is much tendency to the formation of gases, dessicated charcoal may be employed. The most satisfactory method of using charcoal is to prescribe it in bulk; direct that it be put in a tin can and heated on a stove occasionally, to drive away moisture. It should be administered in at least half-teaspoonful doses.

The writer would protest against the common practice of deluging the stomach with alcoholics, digitalis, etc. These are not absorbed when most needed, and the latter is altogether too slow in its action to be used in emergency practice. Of all stimulants, the most generally useful is heat. Instead of the ordinary stimulants, vaso-contracting doses (.0005 or less) of atropine and strychnine may be given hypodermatically.

When the time arrives that our

anxiety turns from the poisoning to the gastritis, the stomach should receive as little interference as possible. Nourishment is usually not needed for two or three days; if imperative, the bowel may be used instead of the stomach. Small quantities of ice and of opium

may be administered to allay thirst, but the stomach is not to be thought of as a digesting organ. In the choice of nutrient enemata, the writer prefers an egg beaten up with salt and water. The entire bulk of the enema should not exceed 100 or 150 c.c.

THE SURGICAL MANAGEMENT OF SUPPURATIVE FORMS OF TUBAL AND OVARIAN DISEASE.*

JOSEPH PRICE, A. M., M. D., PHILADELPHIA.

For centuries there was no precise knowledge of the character and organs involved in pelvic suppuration. Everything was put under the head of pelvic abscess. The term in itself conveys an idea of the limit of the knowledge of the earlier surgeons—if by such name we may designate them—of the character of the relative functions of the pelvic organs, and of the troubles in which they are frequently involved. But it is not productive of results to spend much time in a cemetery; we find more profitable teaching in the work of the men of our own times than in that of the men of earlier centuries. Limited as was the nomenclature, it served to cover about all that was known.

We are no longer greatly in need of medical and surgical terms. Every experimenter, with the coincidence or accident of a success, takes a cross-field cut to get into print and herald the new method or doctrine his genius has evolved. Not satisfied with anything in the old, or in the clearly descriptive and intelligible of the modern, he invents a new nomenclature, and to his new fad or "fad" gives the sweet seductive euphony of his name.

We would naturally suppose that as we grow in precise knowledge of the character and organs involved in pelvic suppuration, there would be a more general concensus of opinion as to the structures involved in the most common varieties of intrapelvic disease, and as to treatment.

While our literature is burdened with discussions of pelvic diseases and their treatment, there have been a few men doing our scientific thinking for us—a few who have answered many of the obstinate scientific questions which lie within the range of facts related to other facts.

Bernutz and Goupiel have carried the spirit and accuracy of the mathematician into their minute investigation, their keen scrutiny of co-ordinate influences and results. They were investigators and not mere controversialists; they devoted time and effort, not to disputing about facts, but to discovering them. Our science would be a sterile thing without the impetus, and the patient, prolonged investigation such men give it. What is best, they give us classified facts, vital relations; give us results, and reasons for them; give us discoveries and not inventions of doubtful value; the logical conclusions of practical investigators and not mere theorizing. As close observers they have given us the results of their observations. A very distinguished scientist has given us a broader meaning of *observation* than is that of common acceptance. He has defined it to mean, "the strenuous exertion of all the faculties behind the eye, as well as the assiduous training of the eye itself." He adds: "I have educated five observers; one of them, to be sure, has turned out to be my deadliest personal enemy, but still I affirm that he is a good observer, and that is the best compliment I could pay him were he my dearest friend." It is true that the men

*Read before the Philadelphia Obstetrical Society, November 7, 1895.

who have given us all the science worth the name, have not been without their personal enemies.

The source from which most mischief has come to genuine scientific discovery has been the class of small critics of the kid-glove or japonica variety—amateur scientists who glean records and combine all discoveries and the results of the experience and observation of many specialists, into one confused mixture. They have been obstructionists, for the reason that they have diverted attention from subjects of vital importance which should receive the most profound study. It is not claimed that all the conclusions of our eminent scientists are without the confines of legitimate criticism and controversy. There are many errors to be corrected. We have not outgrown the possibility of new achievements. There is much yet within the chaos of facts for our finding.

There are, however, in our science and art some settled truths—truths settled by clinical and surgical experience, which we cannot do better than adhere to; the success is not the same when these are deviated from for the new of some adventurer. Early in the history of true pelvic pathology and surgery, these adventurers and obstructionists referred to, denied the existence of tubal and ovarian disease. Later, recognizing the error of their way, they again became obstructionists in the surgical management. Still later, they became advanced thinkers and originators—full of deep surgical wisdom; critics of well-established, safe and simple forms of treatment. To follow the campaign of a few would-be leaders is one of the most interesting and at the same time disgusting chapters in pelvic pathology and surgery. First, they denied the existence of tubal and ovarian disease; occlusion of tubes with retention of blood, pus or water, with partial or general adhesions to important viscera or structures.

Later they admitted all this, but they tortured original methods of treatment. Simple, direct, and positive methods were criticised. A few months or a year later, they tried to startle the world by rather ultra and heroic methods of treatment; modifying or changing their views and methods about twice yearly, fully

contradicting themselves about every six months.

Nothing could be more unfortunate for the numerous sufferers throughout the world than the present disagreement as to real pathological conditions demanding simple surgery. Recently the whole subject has been greatly complicated by new methods, new appliances, and positively new men or operators. I say new operations, because they have been in the field but about two years. Mr. Tait organized a large and wonderful school in pelvic surgery. They followed his simple and complete methods with startling success throughout the world. The reports of small and large series of successful operations for greatly complicated troubles, were very numerous. The reports in about all cases were of a pleasing nature. Early in the history of this work the followers of Mr. Tait had a lower mortality and better results in a more complicated class of troubles to deal with, than have the present school of undecided operators.

Much of the new work is that of a class of men who have served a very short apprenticeship. The new gynaecologist is like to homeopathy—that which is new is not true, that which is true is not new, a fact peculiar to both. The notable battles fought are worthy of our thoughtful consideration. The statistics and tables given will not stand before the veteran abdominal operator. Much of the work shows decided timidity; and some of the tables, with the history of the cases, would indicate unjustifiable work. Some of the blind and blundering procedures remind one of a very common expression of women—an untruth in its bearing—"What you don't know will never hurt you!" It is by what we have done and are doing, and the results thereof, that professional and non-professional judgment is influenced. Electricity, sacral resections, and a number of fads, are no longer heard of; they served but a short day. Infrapubic work, so much lauded at present, will do a world of mischief before it is discarded.

I can not understand how any one familiar with pelvic disease, with knowledge based upon a large suprapubic experience, can claim superiority for the

lower method. With a large experience with vaginal hysterectomy for malignancy, and in operative obstetrics, the facts, as confirmed by experience, force one to the adoption of the upper method for ease, for the exercise of good surgical judgment, for completion and for refinement of technique. Sufficient time has not elapsed to give statistics value as a criterion of judgment. A longer and more general trial of the method will give shocking results. For actual disease—pelvic, acute, or chronic—the numerous unrecognized injuries and accidents to surrounding structures and important viscera will stay the hand of all conscientious surgeons, or bring reproach upon abdominal surgery generally. The absolute incompleteness of this method must condemn it.

An operation, to be complete, must remove all that it professes to remove. It must correct all pathological complications and lesions, and leave all surrounding structures in as normal relations as possible. Unrecognized and unrepaired fistulae, to the number of five or six per cent., following the infrapubic operation, is alone sufficient reason for its total rejection as one of the most imperfect, inefficient, and unsatisfactory methods ever practiced in gynaecology.

The careful reading and studying of good abdominal and pelvic literature—the contributions of experienced investigators and thoughtful observers of all phases of the operation—furnishes the most convincing arguments in favor of the suprapubic method. Ignorance, prejudice or timidity, only will bar out the proofs so ready at hand. The logic of results certainly will not.

The common expression "inoperable" comes from the infrapubic operators or adventurers who have just stumbled into the field of abdominal surgery, and are asking, in the phrase of an ex-Congressman, "Where am I at?" He attempts an abdominal section, finds a few adhesions, wipes his thoughtful brow, breathes out a few expressions of surgical wisdom, closes an eighteen-inch incision by "My method"—his certainly—and then declares the case "inoperable." He then suggests or attempts the new dismal-swamp procedure by stabbing, through the vaginal vault, with a knife or scissors, a pus-tube, or ovarian abscess;

or he extirpates the little healthy uterus, stating that "the adhesions of the appendages were so solid that I could not complete their extirpation." I presume this same operator and authority would remove the penis for unilateral or bilateral buboës, and consider it good surgery.

The suprapubic *surgical* management of suppurative forms of tubal and ovarian disease is easy in the acute cases, complicated and trying in the many neglected and chronic cases, but rarely is it necessary to "back out from the operation at the table," or to abandon the operation at any point. The management of the omental and bowel—small and large—adhesions, and the careful repair of all bowel lesions, is easy and is vital in every case.

The enucleations are complete and easy in puriform disease. A prominent operator records that, "I have left twenty-one times parts of the appendages in the pelvis in the one hundred and fifty-seven cases of serious suppuration upon which I have operated."

Reflect a moment upon this recorded admission of a man traveling as a gynaecological missionary in America, where gynaecology had its genesis. I have, hundreds of times, repaired bowel lesions, and I have freed adhesions by the hour. Nothing in my professional work gives me more pleasure than the ability to deal with visceral complications and lesions incident to the natural history of intra-abdominal and pelvic disease. The scientific and surgical interest of the American profession in bowel and all visceral surgery, as exhibited in the records of surgeons, is a matter of very natural and just pride. There will be no more encouraging or brighter chapter in the history of surgery than that which will record the work of the last decade.

The suprapubic method, as perfectly practiced—free of errors of omission and commission—is the only operation that can give perfect, immediate, and permanent results. The accidents, complications, and sequelæ commonly referred to in discussions of the suprapubic operation—of infection, adhesions, fistula following drainage, and improper ligatures—are all avoidable, except in very feeble patients.

AN IMPROVED SYRINGE FOR INFILTRATION ANÆSTHESIA.

BRANSFORD LEWIS, M. D., ST. LOUIS, Mo.

During the past year I have been making large use of Schleich's method of producing local anæsthesia by infiltrating the tissues with an innocuous solution of salt, morphine, cocaine, etc., the anæsthetic effects resulting from the method of applying the fluid rather than

the promptness of the effects are advantages readily evident.

But I have met with one objection that restricted the use of this method in a marked degree. It is the fact that, no matter how easily and satisfactorily it may be employed in the superficial structures, where there are no large vessels in danger of being punctured with the hypodermic needle, when one is injecting in the depths of a wound in the neighborhood of large arteries or veins, as in enucleating bubo-glands immediately above the femoral vessels, etc., the likelihood of running the needle into one of them and producing disastrous results is not a fancied one.

By means of the needles represented in the cut, I have been enabled to do away with this difficulty. They are blunt-pointed, and made of German silver, so that, though of sufficient stiffness to be thrust into the connective tissues of a wound after the skin has been severed, they would not injure a blood vessel if pushed against one.

The anaesthesia is begun, therefore, with a sharp steel needle, and continued with either of the two silver ones. The choice between the latter depends on whether a curved or straight needle is more conveniently used.

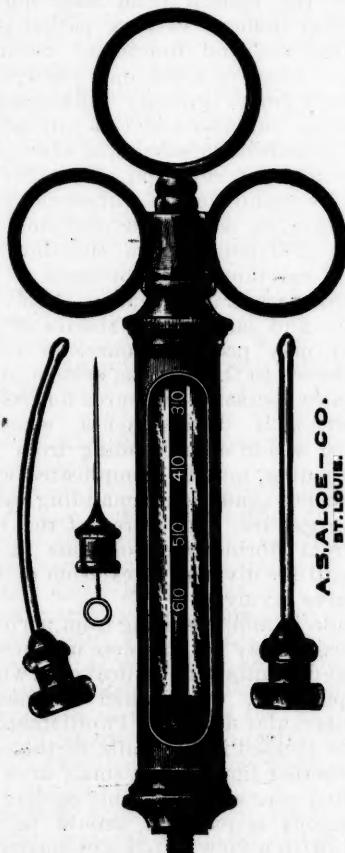
The advantages offered by this improvement have shown themselves to be eminently practical and serviceable, and, in my estimation, will advance the scope and usefulness of the method to a great degree.

Stains and Their Removal.

Tar can be taken off with petroleum.

Paints must disappear before turpentine and perseverance.

For iron mould, spread the stained part on a pewter plate set over a basin of boiling water, and rub the spots with bruised sorrel leaves, then wash the article in soft warm suds. Or, cover the spots with a paste made of lemon-juice, salt, powdered starch, and soft soap, and expose to the sunlight.



from the drug or drugs employed in it. It has been a source of great satisfaction to both me and the patients on whom it was used. The minuteness of strength of drug employed, removes every element of danger from that source, even though a large quantity of the solution be injected: and the completeness and

COMMUNICATIONS.

SURGICAL INTERFERENCE IN RECTAL DISORDERS.*

J. McFADDEN GASTON, M. D., ATLANTA GA.

The rectum is an ovoid canal extending from the sigmoid flexure of the colon to the anus. It is narrowest above and below, presenting a pouch-like shape, capable of great expansion and serving as a reservoir for the debris, which results from the completion of the process of alimentation. Its walls are thicker than those of the colon and capable of great contractioiu in expelling the excrement. The serous coat invests its upper part and forms the meso-rectum and extends on the sides sparingly, but more in front. The rectal fascia, of fibro-connective tissue, with its blood-vessels, surrounds the lower portion of the rectum.

"There are two sets of muscular fibers encircling the lower part of the rectum, known as the outer and inner sphincters, by which it is automatically closed except when dilated voluntarily for the release of flatus or the discharge of fecal matter. There is also another distribution of circular contractile muscular fibers at the upper limit of the rectum, which constitutes the division between it and the sigmoid flexure of the colon. This may be appropriately designated as the recto-colic sphincter, and forms an effective barrier ordinarily to the descent of the excrement into the rectum. This annular muscle has not received from anatomists or physiologists the consideration which its rôle in the intestinal functions warrants. It is a veritable constriction from muscular contraction, by which the colon is normally closed against the descent of the fecal mass into the rectum." Before the excrementitious matter reaches this constictor it is deprived of its nutriment, and after passing this annular division, it is deposited in the reservoir below until a convenient opportunity is afforded

for its expulsion through the anal outlet.

The multiform departures of the tissues of the rectum from their normal condition induces various pathological modifications and functional derangements. There are not only changes of structure from ordinary inflammatory processes, but also material alterations in the constituent elements of the organism from a deterioration of vitality induced by syphilitic and tuberculous degeneration, as well as a profound depravity of structure from the development of carcinomatous neoplasms.

Simple fissure of the anus, involving mucous and submucous tissues of the rectum, may prove a source of reflex disturbance to the nervous system, so as to require operative measures for relief. Hemorrhoidal developments, whether confined within or protruding from the anal opening, may be complicated with sanguineous exudation demanding a surgical procedure. Strictures of the rectum from fibrinous depositions in its walls call for division or excision of the structures involved.

Fistula in ano, resulting from perirectal abscess, may be complete or incomplete, and admits of no radical cure without operation, even when associated with tubercular disease. Papillomatous nodules, located in the walls of the rectum, whether limited to a small area or extending over a considerable portion of the mucous membrane, should be removed, with a view to obviate their degeneration into a malignant form of disease. When carcinomatous induration of the rectal tissues is detected early, there is encouragement to undertake an operation, but after the breaking down of the neoplasm with infiltration of surrounding structures, no benefit is derived from excision of the parts involved.

It is a noted point in regard to the prac-

*Read before the Southern Surgical and Gynecological Association, at the meeting in Washington City, November 12, 1895.

ticability of eradicating rectal troubles of syphilitic origin by medication, and with the present light on the subject it seems justifiable to resort to such a surgical measure as the condition indicates, while constitutional treatment is being carried out in the case.

There are instances of supposed development of specific diseases in the form of stricture of the rectum, after the lapse of many years subsequent to any syphilitic contamination, and some authors claim their ability to diagnosticate specific stricture even without a previous history of primary syphilis. But the medical profession should be very guarded in coming to such a conclusion upon a general consideration of the nature of the case; and without sufficient evidence of the initial lesion in a patient of respectable position in society, no theoretic bias should lead to a diagnosis of syphilis.

There is a rectal relaxation consisting in prolapse of the intestinal wall, which, in young subjects, is often relieved without resorting to any operative measure. But again, this occurs in adults or even in old subjects, when nothing short of an active surgical interference can be relied upon for relief, and even with the most vigorous measures, prolapse of the rectum proves, in some cases, intractable.

There is not infrequently an ulceration extending around and within the lower part of the rectum, involving the glandular structure near the anal outlet, which is only amenable to excision. This has been mistaken for the breaking down of hemorrhoids, but is quite distinct in its pathological condition, and should not be confounded with other ulcerative degeneration of the rectal tissues.

While there are some rectal disorders besides those enumerated which call for the surgeon's attention, it is not requisite to enter into their consideration in this general summary of the conditions demanding operative interference.

It will be perceived that the rectum affords material for surgical work of the most important character, and it should not be relegated to those professing to deal with so-called orificial surgery.

The readers of the *Annual of the Universal Medical Sciences*, for 1895, will note that Dr. C. B. Kelsey limits his contribution to syphilitic and cancerous dis-

ease of the rectum. I have noticed, however, that another specialist in this department, Dr. Joseph M. Mathews, is arousing the dormant energies of the profession to the various phases of rectal troubles through his publications, and especially in his *Quarterly Journal*. While the operation of Kraske and others for the extirpation of the rectum does not receive his sanction, yet there are desperate cases in which some form of removal is warranted, rather than leave a patient to die without any operation.

This matter of rectal surgery is not viewed from the standpoint of the specialist, as my attention has not been directed to it except as a part of my work in the rather extended field of a general surgeon. But I am fully impressed with the conviction that many cases find their way into the hands of quacks which ought to be treated by members of the regular medical profession, and preferably by those who have made a special study of rectal diseases and are prepared to treat properly all the surgical disorders of the rectum. In the paper by Dr. Arpad G. Gerster, before the American Surgical Association, upon the surgery of the rectum, in 1893, there is a full resumé of cases treated during four years in the Mount Sinai Hospital of New York. There were 557 patients suffering from rectal ailments admitted within this period; of these 280 were classed as hemorrhoids; 167 were cases of fistula, including the more acute forms of ischio-rectal trouble; 17 cases of carcinoma; 11 cases of prolapse; 6 cases of cicatricial stricture; 6 cases of chronic ulcers; 7 cases of polypus; 1 case of multiple adenoma; 2 cases of congenital atresia of the anus and one of the rectum, with 4 cases of anal fissure.

It will be observed that hemorrhoids and fistulae make up four-fifths of the entire number of cases involving the rectum, and it seems remarkable that only four cases of fissure should have appeared, making an average of one to each year, when this is generally regarded as of frequent occurrence. Dr. Gerster performed extirpation of the rectum in five cases, four times for carcinoma, and once for stricture caused by ulcerative proctitis. In both, the operation of Kraske was performed. Two

other cases, in which about six inches of the gut were removed by Kraske's operation were successful. "In the case of a woman fifty years old, whose very wide pelvic aperture permitted easy access without extirpation of the sacrum, the coccyx alone being excised, four and a half inches of the rectum were removed according to the old-fashioned perineal method. She made an easy and rapid recovery." By Gerster a preference is given to the radical operation over colotomy, where the condition of the patient permits it, but the patients should be carefully selected, in view of the general powers of resistance in the patient rather than in the extent of the local disease which is encountered. It is urged that only such cases should be selected as have a good circulation and whose heart and blood supply are fairly preserved. Preliminary colotomy is enjoined where much fecal distress and more or less fever exist; while preparatory feeding and general regimen are held to be essential for success.

In the discussion of this paper, Dr. Lewis S. Pilcher, of Brooklyn, presents some interesting data from the service of Dr. Fowler and himself in the Methodist Episcopal Hospital of Brooklyn, N. Y., relative to carcinoma of the rectum. Of ten cases under observation in the last five years, three presented such an extent of local disease and general cachexia that operative interference by extirpation was inadvisable. In the fourth case, in which the disease extended four inches above the anus, operation was refused. In the other six cases, operations were done with two deaths as the immediate result, and without a radical cure in either of the other four cases, though life was prolonged for some time. One of these patients was twenty-nine years old, and another only twenty-three years.

Dr. H. M. Mudd, of St. Louis, states that he has removed the upper portion of the rectum and the lower portion of the colon through the abdominal cavity with success.

Dr. L. McLane Tiffany, of Baltimore, says that by proctotomy he has utterly failed to give relief in rectal troubles, and he believes that colotomy gives the best results.

Dr. T. F. Prewitt, of St. Louis, claims

that a great many cases of cancer of the rectum are not suitable for excision, and that inguinal colotomy is the proper course in such cases. He thinks it is better to make a complete section of the colon and bring both ends of the bowel out. In this way you avoid the passage of any matter through the lower part and do not need any spur.

In closing the discussion, Dr. Gerster remarked that he had not mentioned closure of the colon after extirpation of the rectum, but he had reclosed the opening into the colon when the cause for which the colotomy was done had been removed. His section being transverse, including almost the entire circumference of the bowel, both apertures protrude through the external wound. He believes that the spur is essential in colotomy.

In an editorial review of operative measures for cancerous affection of the rectum in the *Annals of Surgery*, by Dr. J. P. Warbasse, a full report of those having large experience in the treatment of this class of cases is presented. I would refer those interested in deciding upon the practicability of affording relief in carcinoma of the rectum, to this concise and impartial record without entering into minute details of the observations. It may be stated, however, in general terms, that conflicting views are presented as to the stage at which operative measures of relief are admissible, and no definite conclusion can be arrived at in regard to the precise steps which are indicated, or as to the mode of proceeding in different cases. An operation adapted only to women is detailed with some confidence in its advantage, which, so far as my observation goes, has not been practiced in this country. It consists in dividing the whole perineal body into the rectum, and thus secure an ample field of operation, which is subsequently to be re-united by sutures.

The burning and urgent appeal to the surgeon to-day is for a definite settlement of the issue as to active interference in cases of pronounced cancer of the rectum. Shall we content ourselves with the mere palliative measures of inguinal colotomy and leave the diseased structures untouched, as urged by Dr. Matthews, in his paper before the Amer-

ican Medical Association; or shall we endeavor to remove all the tissues involved by extirpation as recommended by Dr. Gerster, in his paper presented to the American Surgical Association? The full statistics of results in the hands of skilled operators ought to be collected and a fair analysis made before a final adjudication of the question can be

reached. The materials for such a comparison should be obtained from cancer hospitals in this country and other countries, as well as from general hospitals receiving and treating this class of patients, and being grouped together, a fair inference may be drawn as to the feasibility of active interference in any case of carcinoma of the rectum.

VAGINAL HYSTERECTOMY.*

JOHN B. DEAVER, M. D., PHILADELPHIA.†

PROGNOSIS.—As to the probable outcome of the operation of a vaginal hysterectomy for carcinoma, it is too early in the history of the operation to draw definite conclusions, but the results thus far have proved that especially early and even later operation prolongs life. There is no doubt but that removal of the uterus for carcinoma offers a longer immunity from return than does operation for the same disease in other parts of the body, if done early.

ANATOMICAL RELATIONS.—The relations of the ureters are of so much importance in this operation that I have thought it worth while to describe their course. They extend from the termination of the pelvis of the kidney to the bladder, passing through the laminae of the subperitoneal connective tissue. Their average length is about twelve inches. At their commencement they lie about three inches apart, but on nearing the base of the bladder they run forward and pierce its wall, and at their termination are separated by a distance of about an inch and a quarter.

We may describe them as consisting of three portions, viz.: abdominal, pelvic and vesical. The abdominal portion is in relation posteriorly with the psoas muscles and its fascia, the genito-crural nerve, and the common iliac artery. Anteriorly, they are covered by the peritoneum, and on the right side lie partly under the caput coli and ascending colon,

and under the descending colon and sigmoid flexure on the left. About the middle of their course they are joined by the ovarian vessels, which cross them to descend into the pelvis along their outer border. At the brim of the pelvis the right ureter lies just behind the peritoneum, where it can be seen with the ovarian vessels. On the left side the relations of the ureter to the sigmoid flexure depend entirely upon the length of the meso-sigmoid. Thus in one case the ureter may lie behind the sigmoid vessels, and in another directly behind the intestines. After crossing the psoas muscle the ureter crosses obliquely over the common iliac artery above its bifurcation, dropping into the pelvis at this point.

The pelvic portion runs in front of the sacro-iliac synchondrosis, then upon the obturator internus muscle and its fascia, finally leaving the pelvic wall to join the bladder. It lies, at first, usually to the inner side of the internal iliac artery, subsequently to the outside, and is again crossed by the ovarian veins and artery, which leave it at the acute angle. It then descends in the lower cellular tissue to the floor of the pelvis in a forward direction, passing directly under the uterine artery, and through the uterine plexus of veins and beneath the base of the broad ligament. Finally it crosses the upper third of the vagina to reach the vesico-vaginal interspace, and pierces the bladder opposite the middle of the vagina.

The vesical portion, about half an inch

*Read before the Philadelphia Academy of Surgery.

†Professor of Surgery in the Philadelphia Polyclinic; Surgeon to the German, Philadelphia and St. Agnes' Hospitals.

in length, runs obliquely downward and inward through the coats of the bladder to open on the mucous surface at a distance of about an inch to an inch and a quarter from its fellow, and the same distance from the internal urinary meatus.

The uterine artery leaves the lateral pelvic wall at a point just above the ischial spine, reaches the vaginal wall at the level of the os externum, and then runs upward along the side of the uterus to reach the fundus.

PRELIMINARY TREATMENT.—Much depends upon the preparation of the patient for the operation. The most careful antisepsis of the vulva and vagina should be carried out. It is the practice of some surgeons to have the hair covering the soft parts removed; I do not believe this necessary if this region be thoroughly scrubbed twice a day with some good detergative soap for two or three days prior to the operation. The vagina should be cleansed with soft soap, and then both the external genitals and vagina irrigated with a 1: 60 carbolic acid solution containing an amount of bichloride of mercury to make it equivalent to 1: 4000. The bowels should likewise be carefully regulated, and a mild laxative administered for a few days before operation, to thoroughly clean out the lower end of the alimentary canal. If there be present granulations covering the cervix or occupying the uterine canal, or should the cervix be eroded and accompanied by a fetid discharge, it would be wise at first to curette away the granulation tissue exciting the discharge, and have the vagina subjected to bichloride irrigations twice or thrice daily, the frequency depending on the character of the discharge.

METHODS OF OPERATION.—In the operation of vaginal hysterectomy, one of three methods are practiced—the clamp, the ligature and that by enucleation (Langenbeck's). There is no doubt but the method by enucleation is the ideal one, and should be adopted when the case is suitable for it.

The enucleation method consists first in liberating the cervix by carrying two elliptical incisions through the vaginal wall in front of and behind the cervix, or by a circular incision carried around the cervix, the dissection being made close

to the cervix. This should be the rule, whatever method be employed. In the removal of neck tumors in the immediate neighborhood of large vessels, or, in fact, any tumor occupying an important vascular locality, the surgeon follows the practice of dissecting close to the tumor. The second step in the enucleation method is in making a subperitoneal dissection of the uterus. I think this should be the operation of choice in the early cases at least.

Between the clamp and the ligature method there is, in my mind, no doubt of the superiority of the latter. I grant there are a few cases where the clamp method is probably the better operation, but these constitute the exception. The ligature method of vaginal hysterectomy is as much superior to the clamp as is the dropping of the stump in the supravaginal, having tied off the uterine appendages and ligated the uterine arteries, over that of the *perrenaud*. The ligature is surgical, while the clamp compared to it is unsurgical.

In the selection of any operation, that which will leave the patient the most comfortable, not, of course, exposing her to a single additional risk, should, in my judgment, be the one of choice. I am frequently confronted with the argument, "Why, the clamp method can be done in fifteen minutes and less." In answer to which my reply is: The ligature method can be done in thirty to forty minutes. The question of a few moments longer in doing the operation is of no import, as, if the case is suitable for a hysterectomy, there will be no shock. The loss of blood in the ligature method is no greater than that in the clamp, if done properly, and the security against secondary bleeding is much greater. The ligature method is one that can be made a strictly aseptic one, and maintained so throughout, while in the case of the clamp there is always some suppuration following, thus exposing the peritoneum to infection from without.

The question may arise, Why not close the wound in the vault of the vagina? The wound closes itself. I have observed, and demonstrated after the removal of the uterus, the almost perfect apposition of the cut surfaces; and therefore, have never been able to see the necessity

of introducing sutures. If bleeding follows reaction from the anesthetic, and the wound in the vagina has been closed by sutures, it may be the cause of a subsequent abscess, while in allowing the edges of the wound to oppose naturally, and introducing a little packing of iodoform gauze into the vagina, not carrying it into the pelvic cavity, the blood finds its way into the vagina and is taken up by the gauze.

In either the ligature or the clamp method, when the cervix is entirely destroyed, thus making it impossible to grasp it with a vulsellum or pressure forceps to pull the uterus down, my practice is to introduce a tenaculum into the uterus, by which I am able to make slight traction, and thus steady the organ; this allows me to free the vaginal walls and expose the supra-vaginal portion of the cervix, which I grasp with the vulsellum, and thus command the uterus through the remaining steps of the operation.

OPERATION.—The bowels and bladder having been emptied, the patient is anesthetized and placed in the lithotomy position, with her limbs held by assistants. A Sim's speculum is introduced and the cervix uteri exposed. The cervix is then grasped either by a vulsellum or a pair of pressure forceps, the latter being less likely to slip or tear out. Traction is made upon the uterus, drawing it downward and forward to expose its under surface. An incision is carried across the exposed surface to the situation of the internal os, or as far away from the eroded tissue as possible, and with the fingers the posterior wall of the vagina and the areolar tissue are freed from the uterus down to the peritoneum. The forceps holding the uterus is then carried downward, and the incision continued to make it encircle the organ. The structures in advance of the uterus are dissected away in the manner before described, great care being observed to keep close to the body to prevent injury to the bladder; having reached the vesico-uterine folds of the peritoneum, the vagina is thoroughly irrigated. The recto-uterine and vesico-uterine folds of the peritoneum are now broken through, and, if the operator so desires, a small piece of gauze or sponge introduced to prevent prolapse of the intestine; this

I do not believe, however, to be essential. The female blade of the clamp is then introduced along with the palmar surface of the finger, which acts as a director. The blade of the clamp is made to hug the under surface of the broad ligament, and the end of the blade is made to pass beyond its upper limit. The handle is depressed to make the end appear above the upper surface of the ligament, the other blade introduced, and the clamp locked. The opposite side having been treated in the same manner, the attachments are severed and the uterus removed.

A piece of sponge or gauze is introduced, and the vagina is irrigated; gauze is loosely packed around the clamps to prevent ulceration of the soft parts from pressure, and a light packing placed in the vagina to act as a capillary drain.

The clamps may be removed at the end of the second or third day. In removal of the uterus by the ligature method, the early steps are the same as in the clamp operation. Having freed the uterus from all its surrounding tissues, except the broad ligaments and the peritoneum covering the fundus, the vagina is thoroughly irrigated. The broad ligament are now to be ligated. An aneurism needle, curved on the flat and set at right angles to the handle, is threaded with a silk ligature and passed through the base of the right broad ligament a short distance from the cervix; this secures the uterine artery. Successive ligatures are then applied until the entire ligament is tied off. As each ligature is tied the included portion is cut free from the uterus. Having ligated and secured the right ligament, the left is treated in the same manner.

If there be an elongated body, as is often found in uterine carcinoma, great difficulty may be experienced in ligating the entire ligament upon one side without tying off and removing a portion of the ligament of the opposite side. By adopting this course the organ can be pulled down and the remaining ligatures easily applied. As the ligatures are being tied down, the traction of the uterus should be relaxed. The uterus having been freed from its ligamentous attachments, the peritoneum is broken through and the organ removed.

THE MEDICAL AND SURGICAL REPORTER

ISSUED EVERY SATURDAY

THE BUTLER PUBLISHING COMPANY, Publishers P. O. Box 843

104 Girard Building, Philadelphia, Pa.

HAROLD H. KYNNETT, A.M., M.D., Editor

Entered at the Philadelphia Post-Office as second-class matter.

TERMS:—Three Dollars a year in advance. Sent four months on trial for \$1.00.
REMITTANCES should be made payable to the Publisher only, and should be made by Money Order or Registered Letter.

NOTICE TO CONTRIBUTORS:—We invite contributors of value to the profession, and if published originally in THE REPORTER such will be paid for at liberal rates, or a limited number of copies of THE REPORTER will be supplied, as the author may elect. Hereafter where reprints are desired writers are requested to make a note of that fact on the first page of the MS., but must order reprints directly from the publisher, who will supply the same at cost rates. Contributors should inclose stamps for postage, that the articles may be returned if not found available.

PHILADELPHIA, SATURDAY, DECEMBER 21, 1895.

EDITORIAL.

THE WILLIAM PEPPER LABORATORY OF CLINICAL MEDICINE.

The William Pepper Laboratory of Clinical Medicine, complete and ready to begin work, was, on the 4th inst., formally presented to the University Hospital, and to the University of Pennsylvania.

This new departure is of significance higher than its character as a memorial to an eminent man, and broader than its importance as an extension of educational facilities, for it is an earnest of the strength, sincerity and progress of the movement for higher medical education in this country, and it gives practical assurance of the future development of American medical science.

The institution is unique in that it is made for the specific purpose of promoting and stimulating original research and improvements in methods of diagnosing and treating the diseases of human beings and of giving advanced and special practical instruction in the new

methods to post graduates, that is, to men who have already obtained the degree of doctor of medicine.

Dr. John S. Billings, director of the University Hospital and of the Laboratory of Hygiene, delivered the address of presentation, in the course of which he read a letter from the donor and endower of the new laboratory, Dr. William Pepper, ex-Provost of the University of Pennsylvania. Extracts from this will give a history of the circumstances which developed this new department:

"My father, the late William Pepper, held the chair of the theory and practice of medicine and of clinical medicine in the University of Pennsylvania from 1860 until the Spring of 1864, when he was forced to resign by the progress of the disease which caused his death on October 10, 1864, in the fifty-fifth year of his age.

"Already at that time a few young

men had formed the definite hope of reforming the system of medical education in America, and of placing it on the sound basis of clinical teaching. I can say for some of them, including my brother George, who died in 1872, at the age of thirty-two years, after a brilliant and all too short career, that the eloquent advocacy of clinical teaching and its effective application by my father supplied at once the inspiration and the exemplar. Both father and son wore themselves out in the service of humanity and science, and fell victims to the terrible scourge of pulmonary consumption.

"It is not necessary to review the long and weary struggle for reform in medical education which has only now ended. The role played by the University of Pennsylvania has been a proud one, as beffited her traditions and her obligations. The names of Edward Rhodes, of Horace Binney Hare, of John S. Parry, of William F. Jenks, should not fail of mention, although they fell early in the struggle; for these were brave spirits, who dared to aspire greatly. And other names, Leidy and Agnew of the immortals; and Stillé and Weir Mitchell, still happily preserved to us in their rare intellectual vigor; and Wood and Norris and Tyson, my life-long colleagues, must be named with grateful tribute for their labors in the cause of higher medical education, and of clinical teaching and scientific research.

"It was our fond dream, in those early days, that a happy time would come when well-equipped laboratories with adequate endowment would offer the chance of original investigation which was then denied. Horace Hare fitted himself by long and costly training for the special work of chemical research in the field of clinical medicine. His gifts and attainments were worthy of his descent from America's first great chemist, Robert Hare. * * * He entered at once with enthusiasm upon important chemical researches in connection with cases of disease in the hospital wards. In less than one year pulmonary consumption attacked him, and he died in 1878. Parry and then Jenks succumbed to the same affection, while Rhoads, one of the most beloved of our little group,

died of organic heart disease. You cannot wonder that I registered a vow to do what I could to secure the erection and endowment of a special department of the University Hospital for chronic diseases of the lungs and heart and a laboratory of clinical medicine to promote original research into the causes and nature of disease."

The most important step was taken when I learned one morning in 1889 that it might be possible to secure to Philadelphia and to the University the services of Dr. John S. Billings. Before evening Mr. Henry C. Lea had responded to an earnest appeal that he would increase a previously contemplated gift to equip a small laboratory of hygiene to an amount sufficient to erect a complete laboratory. His conditions were that if an additional sum of \$200,000 were secured for endowment; if Dr. Billings were secured as director of the laboratory; if the study of hygiene were made obligatory on students of medicine, of dentistry, and of certain other branches, he would erect at his expense a laboratory of hygiene, at a cost of not less than \$50,000.

He stipulated further that when the requisite amount of \$200,000 was secured for the endowment of the laboratory of hygiene an effort should be made to obtain subscriptions of money sufficient to justify the board of trustees and the medical faculty of the University in raising the standard of medical study and in prolonging the course to four years. In order to secure compliance with this final condition it was deemed necessary that a subscription of \$50,000 should be made to the medical department, and that an additional guarantee of \$20,000 per annum for five years should be secured. This was done, and it was only reasonable that it should be done. Any one who appreciates the commanding influence exerted by the medical department of the University of Pennsylvania will realize that it was essential for the establishment of higher medical education throughout this continent that it should be demonstrated here that such advance could be made and could be maintained with good practical results. As a matter of fact the result of the important change was unexpectedly gratifying. The increased attractiveness of the longer and

more practical course of instruction inaugurated outweighed the much greater cost and difficulty of securing the degree. The receipts of the medical school did not fall off; no part of the guarantee fund was called; and the medical faculty cordially assented, by resolution adopted February 20th, 1894, to the proposal that my subscription of \$50,000 should be applied to the erection and partial endowment of a laboratory of clinical medicine. The board of trustees of the University and the managers of the University Hospital and the medical faculty concurred cordially in approving the conditions connected with the proposed foundation.

"There seems to be every reason to hope that the building thus constructed upon plans provided by you will prove well adapted for the purpose in view. That the restriction of the use of the laboratory to original research and to post-graduate instruction has secured general approval, and has already met a recognized need, may be judged from the fact that nine associates have already received appointments, and have been assigned to distinct fields of original investigation."

"To any one interested in the study of any special disease or group of diseases, such as tuberculosis or heart disease or infectious fevers—all of which destroy so many thousands of precious lives annually—the advantages of establishing a special research fund must seem obvious. I earnestly trust that endowments will gradually accumulate around this laboratory. The good results would be far reaching and enduring. It is indeed hard to conceive in what way we, whose dearest and most cherished interests will be affected vitally by the results of such researches as will be conducted here, can better display our sorrow for the dead and our love for the living than by strengthening the resources of such institutions as this which is to be opened formally to-day. May it long endure to promote the interests of suffering humanity and to enlarge the boundaries of medical science.

Your obedient servant,

WILLIAM PEPPER.

The building is sixty-two feet long, forty-two feet wide, and four stories

high, with a basement cellar; built of brick and terra cotta on a stone base to the first floor, with a green slate roof; and fitted up inside with tables, work-benches, and apparatus of various kinds.

The essential idea of the plan is a central bundle of perpendicular flues forming a large chimney stack, around which the work rooms are so arranged that each one has its own flue on its inner face and an abundance of light on its outer face. On the first floor above the basement are rooms for microscopical, for chemical, and for bacteriological investigations of the secretions, excretions, outgrowths, discharges, and other products from the bodies of the sick; with a balance room. On the second floor are rooms for anthropometrical work and research, the laboratory of the director and his assistant, and a store room. On the third floor is a large laboratory for post-graduate students, and a dark room for photographers' work. On the fourth floor are a research room for special workers, an assembly room, a library, and a janitor's room. Corridors connect each floor with the adjacent hospital pavilions, which will be devoted to medical cases. One of these corridors will make an excellent photograph gallery, a dark room being provided in the laboratory. The building is heated by steam and at present lighted by gas.

The director and assistant director of the laboratory are to be appointed annually by the board of managers of the University Hospital, upon the nomination of the professor of the theory and practice of medicine and of the professor of clinical medicine, in the medical faculty of the University. The present director, duly appointed in accordance with this condition, is Dr. William Pepper.

In closing his address Dr. Billings paid a fitting tribute to the donor:—

"Broad and far has been his outlook

in thus providing for the future a heritage of power, which mildew, flame, and frost cannot harm. It is not a statue or carving or memorial arch that he has given, things that will blacken and moulder and crumble as the centuries roll by, until the mills of the gods shall have ground them to dust. It is a perpetual wellspring of force, a storage battery which will fill itself and give out warmth and light and motion so long as this institution of learning shall exist on the earth. He says, and says it with authority, find me the means of making the lives of men longer and more efficient—of putting aside the plague that has destroyed our fathers and brothers and threatens to consume our children; his demand is not for the fruit which is known and harvested, but for that of regions yet unknown and unexplored, for which he provides the seed, for charts

of dangerous bays and coast lines still unsounded and not yet triangulated.

"The taking such a step as this requires not only the opportunity of means, but also wisdom, courage, faith; wisdom, as regards selection of the unknown regions to be explored, and in providing motive power and guidance for the work to be done; courage, in investing funds in an enterprise the precise results of which cannot be predicted; and faith, in the future progress of science and in the future managers of this important trust.

"But wisdom shall be justified by her children, and this far-seeing, bold-planning man of the silver tongue and the open hand will be remembered as the founder of the first distinctive laboratory for research in clinical medicine in this country, so long as there are sickness and death among the children of men."

ABSTRACTS.

MEDICINE: ITS PAST AND FUTURE.*

SIR EDWIN ARNOLD, M. D., K. C. I. E., C. S. I., ETC.

The first impulse of a very busy man when he has been asked to deliver an address is undoubtedly to excuse himself as politely as he can. That impulse may be described as automatic and instinctive. But when the honor fell unexpectedly upon me of being invited to distribute prizes here to-day to the students of the medical school of St. Thomas's Hospital, I could not consider the occasion ordinary. The profound respect which I feel for your noble profession; my true delight in its progress and advancing achievements; the firm hope I entertain of greater medical and surgical developments to come, which will by and by render human life more pleasant and more prolonged; my many friendships among the leading physicians and surgeons of the day; my own

private gratitude to the skill and goodness of some among them; and my personal interest in your great and useful foundation of St. Thomas's—these, with other considerations, suppressed in me that "reflex" and automatic "No" which fatigue and dread of apparent presumption must otherwise have enjoined.

You, gentlemen, begin by self-devotion and fearless defiance of risks which others dread and shun. Your original choice is brave, your early ambition honest, your first steps hard and dogged by the spectre of examination; your daily work, even if ever so little elevated by enthusiasm and faith, is work that brings help and hope to your fellows, and constitutes you the common friends to all.

Moreover, you are advancing like true victors in a march of constantly aug-

*Introductory address St. Thomas's Hospital.

menting conquests over that strange fascinating waste of twilight and wondering exploration which is called "science." There have been times when it was not particularly honorable to be a doctor. The specimens of medical and surgical practitioners whom we find held up to ridicule in the pages of Molière, or in the pictures of Hogarth, deserved as far as can be judged, the pillory of immortal scorn in which their ignorance and pretentiousness have been placed by the genius of satire. Yet there were not wanting, even in times of Thomas Diafoirus, serious and modest searchers after the secrets of healing, men imbued with the dignity and solemnity of their calling ; and, indeed, I think we could fill up every single age from Galen and Avicenna to Ambroise Parè and John Hunter with the names of truly great doctors. But your lot is cast in an epoch of such acceleration of knowledge, such expansion of methods and resources, such ever-increasing power of doing solid good to your kind, that the old satires have died away. The new age frankly honors and values your vocation, in discharging which you yourselves move forward by rules more and more exact and less empirical.

Living men of 60 years or so belong entirely to the present benignant reign—and within that reign we can recognize, though lacking your closer observation, what prodigious progress has been accomplished by medicine and surgery, and, I may add, in the science of sanitation. It was one of the surgeon's of St. Thomas's Hospital—the illustrious John Simon, F. R. S.—who may be said, in conjunction with Mr. Edwin Chadwick, to have invented public hygiene. These great benefactors, and their able assistants, had none of the knowledge which you all, in greater or less degree, now possess about bacilli and bacteria ; but by improved drainage, purer water supply, good paving and scavenging, removal of refuse, and prevention of overcrowding they succeeded in establishing such a difference between clean and unclean places that the way was paved for the fruitful discoveries which followed.

Now you have at ever-extending command the vast new region of bacteriology, wherein sunshine and daylight, and the wonderful natural forces of life, those

that are friendly amongst the microbes, fight on the side of your enlarging science, and, on our behalf, against the "pestilence that slayeth in secret." A great authority has declared that "a day will come when—in London, in Berlin, in Paris man will not die of diphtheria, of typhoid, of scarlet fever, of cholera, or of tuberculosis any more than he dies in these cities to-day of the venom of snakes or of the tooth of wolves."

In connection, moreover, with that promising subject of the antitoxins such as those for diphtheria and tetanus, there is some promise, be it observed, of injections which will neutralize snake poison. Professors Calmette, in France, and Fraser in Edinburgh, after patient experiment with snake venom have apparently succeeded in rendering rabbits, and eventually horses, proof against doses of this 350 times stronger than an ordinarily lethal quantity.

Has anybody given thought in the same connection to what might be done to rescue the draught cattle and horses of South Africa from the tsetse fly ? Whole belts of our growing empire there are cut off from trade by the poison of this tiny plague, which kills all horses, oxen and donkeys that it stings, yet has no power whatever upon the zebras, buffaloes, and wild beasts of the veldt. If the blood serum of these naturally acclimatised and adapted creatures of the same genera, properly applied, could give immunity to South African caravans, millions of money might be saved to the colony.

Let me take permission to tell you that what fills my own heart most with thankfulness, and causes me chiefly to congratulate you on these new days of therapeutic science, is the benign, the blessed discovery, and the now almost universal employment of anaesthetics. If you look into the history of that happy revolution, you will be warned against depreciating fresh ideas by noticing how sadly slow men are to take the hints which Nature gives to them of her very choicest treasures of resource. Why did not anyone act upon what Sir Humphrey Davy had so long before learned and imparted about the properties of nitrous oxide ? The key was already there, but not until many years afterwards did an almost casual hand

(that of an American dentist) fit it into the golden door behind which sat waiting an angel of pity, kinder and more powerful than any Arabian fairy suddenly revealed in her divine beauty and bountifulness to any prince or magician of the *Thousand and One Nights*. Is there anything in human history which more sternly teaches that man must win every boon of Nature by his own ceaseless striving than that this simple chemical and physiological secret of chloroform should have lurked so sadly long in its easy formula, undeciphered, through all those waiting generations when pain was an omnipresent tyrant, whom science could not control, and the operating room a torture chamber, dreaded almost as much by the surgeon as by the sufferer? Think of those gallant sailors of Nelson at Trafalgar, whose bleeding stumps in the gloom of the orlop deck, where plunged into hot pitch to stay the hemorrhage! One would almost expect that, pity for such brave men, and for the countless tender women and children who age after age, so hopelessly endured, Telesphorus, the God of Healing, or Nature herself, would have burst the iron law of her impassive silence, and as Helen did in the *Odyssey* for the sorely-tried Greeks, have poured this nepenthe into the bitter cup of mortal life. I can remember the poetess, Eliza Cook, whom as a boy I knew, when chlorform was still unknown, writing how

Lips that blench not in the reeling strife
Turn silent and white from the surgeon's knife.

Not until 1847, although Humphrey Davy has been so near the revelation, did the anaesthetic age commence, giving to your Art a sure control of anguish; to its boldest practice confidence, quiet, and leisure; and to those who have to lie under that knife a sweet and complete oblivion. I have myself known what it is to pass, fearless of the kind steel, into that world of black velvet tranquility, of which your magic drugs now keep the gate; and to awake as good as healed, grateful beyond words for the soft spell of enchanted peace, and the sure and faithful skill.

I have met in this great Palace of Pain gentle and graceful presences which leads me to allude to one more great and happy change among many that has

come upon your profession; I mean the education and employment of professional female nurses. A great physician once said in my hearing that the three most sovereign medicines he knew were hot water, fresh air, and good nursing. In your fathers' day, gentlemen, we had no good nursing; we had Mrs. Gamp and Mrs. Betsey Prig, or else heavy-handed and heavy-footed female attendants, very different in mind and manner and influence from the lightly-moving and softly-speaking woman, whose carefulness—intelligent, pitiful, but tranquil, trained, and governed—now smooths every sick pillow, and carries out faithfully and fearlessly the ordinances of the doctor. I do not know whether you, the surgeons and physicians, or we, your patients in *posse* or *esse*, are most to be felicitated upon this admirable revolution in the hospital ward and the sick room. There is no doubt that it was primarily due to the example of that most compassionate and noble-hearted woman, Florence Nightingale, who went at the head of a band of nurses, many of good birth, to the Crimean war, and by demonstrating there and afterwards the immense advantages of skilled and high-class nursing, gave to her age the blessing of this modern system and to her sex a new, a suitable, and a most honorable vocation. You have greeted the name of Miss Nightingale with instant and hearty applause. That generous tribute to her—who in her old age and retirement is even now the center of so much silent national affection—encourages me to remember that I am, after all, poet by nature and lecturer only by accident, and that in those dark hours of the Crimean war I wrote certain verses, which are perhaps brief enough to be on this occasion acceptable. If I am so bold as to revive them from their unprinted oblivion, it is because what they express of admiration and gratitude is applicable in a great degree to every good and dutiful nurse, here and elsewhere, who loyally discharges this new and most womanly function.

If on this verse of mine
Those eyes shall ever shine
Whereto sore-wounded men have looked for life,
Think not that, for a rhyme,
Nor yet to suit the time,

I name thy name, best Victress in the strife,
But let it serve to say
That when men kneel to pray
Prayers rise for thee thine ear can never know,
And that thy gentle deed
For Heaven and for our need
Is in all hearts as deep as Love can go !

'Tis good that thy name springs
From two of Earth's fair things,
A stately city, and a sweet-voiced Bird ;
'Tis well that, in all homes
Where thy kind story comes,
And brave eyes fill, that pleasant sounds be heard,
Oh Voice ! in night of fear
Like Night's birds—sweet to hear
Oh Strong Heart ! set like city on a hill.
Ah ! Watcher ! worn and pale
Dear Florence Ningtingale !
We give thee thanks for thy good work and will !
England is glad of thee,
Christ, for thy Charity
Take thee to joy when heart and hand are still !

This topic tempts me to glance at another closely connected with it, which has always had my earnest interest and support—I mean the movement so excellently instituted and so successfully carried out by my most noble friend the Marchioness of Dufferin and Ava for the supply of English-female doctors for India. In that country, by reason of its peculiar institutions, we are secure from any controversial questions as to the fitness of women for your profession. The customs of the *purdah* absolutely forbid the high-caste Indian ladies to avail themselves of male European skill. I was dining once in Jeypore at the table of Surgeon-Major Hendley, the able and trusted friend of the Maharajah, when a message came that the chief Queen had been taken ill, and begged the advice of the British Hakeem. He went, and on returning told us that, although for seventeen years a familiar visitor of the palace, and the private adviser in many matters of the Rajpoot Prince, he had been obliged to suffer his head to be enveloped in a silken bag, and so equipped had been lead into the Zenana, where he had felt the pulse of her Highness, and had examined her with the stethoscope without seeing an atom more of his patient than a glimpse of one jewelled slipper through the strings of the bag. Here is a medical and surgical field, therefore, wide and unfilled, which might absorb any amount of feminine ability and devotion, if only proper public support be given; and I ardently entreat your countenance and assistance

for it in the course of that professional influence to which I well know many among you are destined to rise.

I shall take courage, since your kind attentiveness proves you convinced of the sincerity of my interest in your profession, to touch upon yet another topic, bristling, I know, with dangers from outside observers. I have read, in one of the able disquisitions already quoted, a paragraph dwelling upon Harvey's grand discovery of the circulation of the blood, where, after mentioning that that splendid revelation was the result of experiments performed upon living animals, the talented writer—a great living practitioner—goes on to say: "The whole fabric of modern medicine, the whole difference between the prospect of a sick man today, and his prospects two hundred years ago, rests absolutely on vivisection."

I do not venture, in presence of knowledge and experience so much vaster and riper than mine can be upon such a matter to dispute or qualify that assertion, nor shall I as an individual take on myself to deny to conscientious science, as many persons deny whose motives and arguments I most deeply respect, the right claimed to pursue essential experiments at the cost of the pain and death of innocent creatures. If to give my own life under torture would certainly lead to the saving of very many other lives, I should hate and scorn myself if I had not the will so to die; and as between men and beasts I suppose it is true that we are "more than many sparrows." But my private feeling, founded upon an ever-growing sympathy for the lower animals, an ever-increasing wonder at their gifts and capacities, and an ever-deepening sense of our human responsibility to them, was expressed in a phrase, which I confess was extravagant, used by me to a famous contemporary surgeon, who said: "What, Sir Edwin! May I not vivisect a cat to save the life of a bishop?" and I replied: "Yes, Sir Henry, on condition that you afterwards give the cat a public funeral in Westminster Abbey as a benefactor to the Church and to humanity." Of course that was paradox, but I am persuaded that all of you will understand me, and many will agree with me when I declare that this solemn

right to succor pain by inflicting pain has its best foundation upon an immense reluctance to adopt such a necessity, an anxious economy of anguish in the act; in fine, a feeling not of the heedless experimentalist, but of the priest sacrificing victims for propitiation. I say again that I disclaim any pretension to teach mercy to you whose vocation has mercy for its watchword. I will not share with my age the fruit of patient physiological researches, and then hastily reproach those who have laboriously acquired them for the general good. But as regards my own sentiments, that which chiefly led me to write *The Light of Asia* was the boundless and beautiful tenderness of the Buddhist religion towards the lower animals, whose lives are so mysteriously related to our own, whose lot is so largely at our disposal, and who are to us much as we human beings are to that invisible almighty Power at the feet of which we have sometimes too little cause to wonder if we ask in vain for pity and clemency. Therefore I will be bold enough to-day to put in this humble plea for the dumb martyrs of vivisection, that they may be as few as possible, as mercifully dealt with as possible, and that it be held by the inner *religio Medici* which every true doctor cannot but possess and profess, that the meanest living thing thus sentenced to suffer and to perish for mankind derives from its very doom a certain enhanced regard and a special consideration to which the conscience of him who is a gentleman as well as a doctor will never be insensible.

I am not here, however, as I before remarked, to inculcate reverence for all forms of existence, and tenderness towards all suffering, upon those whose glorious vocation it is to be merciful, sympathetic, and conscientious. Very quickly must the chivalrous aspect of a good doctor's life lay hold of him, as is sufficiently shown by a memorial which I have observed in your chapel. A tablet there records how your fellow student in this medical school gave up his young life in the passionate desire to save that of some obscure and humble patient. To my thinking no ancient cathedral, no chapel of St. George at Windsor, or of Henry VII at Westmin-

ster, no shrine or temple or sanctuary anywhere, can contain an epitaph more touching to peruse, more nobly commemorative of the dead, more splendidly honorable to the institution which trained him, and to-day trains, I doubt not, many like him. We have all of us lately read, too, of the heroism displayed by Surgeon-Captain Whitchurch in the fighting at Chitral on the Indian frontier—heroism graciously rewarded by Her Majesty, and such as casts a lustre upon the whole profession.—*Brit. Med. Jour.*

Philadelphia Academy of Surgery.

THE SAMUEL D. GROSS PRIZE.—The second quinquennial prize of one thousand dollars under the will of the late Samuel D. Gross, M. D., will be awarded January 1, 1900.

The conditions annexed by the testator are that the prize "Shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in Surgical Pathology or Surgical Practice, founded upon original investigations, the candidates for the prize to be American citizens."

It is expressly stipulated that the successful competitor, who receives the prize, shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of the Philadelphia Academy of Surgery.

The essays, which must be written by a single author in the English language, should be sent to Dr. J. Ewing Mears, 1429 Walnut Street, Philadelphia, before January 1, 1900.

Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The Committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The Committee reserves the right to make no award if the essays submitted are not considered worthy of the prize.

A "RUSTICUS" PAPER.*

BEECHMIRE, IND., October 30, 1895.

My Dear Mr. Editor:

I herewith enclose you a copy of the letter alluded to from Dr. Ewerson, of Chicago. I know that you are a student of sociology, and that you are interested in human affairs in addition to professional matters, so I feel sure this letter will be at least entertaining, and if you knew Dr. Ewerson as I do your interest would be still further augmented.

CHICAGO, ILL., June 15, 1895.

A. RUSTICUS, M. D., Beechmire, Ind.

My Dear Old Friend: I have contemplated for some time writing you a letter in regard to my personal affairs, but, much as I craved the privilege of opening my heart to you, I felt a hesitancy in doing so, for I thought of the old adage, "Keep your troubles to yourself, others have troubles of their own." But my desire to impart my experience since coming to this city has at length overcome my reluctance to impose upon you my personal affairs, and I am now beginning a letter with this purpose in view. Undoubtedly you will remember the last happy day we spent together, and how bright my prospects looked to both of us; how the future, illuminated by the brightest anticipations, seemed to open itself up before us like a beautiful landscape. That these anticipations would not all be realized required no prophetic wisdom to foresee, but that so many of them should prove a bitter disappointment was more than either of us could have expected. That I never so far forgot myself as to expect to attain to distinction among the famous and illustrious names that have illumined the annals of our profession, I am free to declare; but I did hope to win a respectable position by honest and conscientious work in those lines to which my tastes seemed to have fitted me, and I did hope for most delightful associations with the able and high-minded men who fill the front rank of our profession in this great city.

As soon as possible after coming here I presented my name for membership in

the Rush Medical Society, and I had already prepared a paper, expecting to be put at once upon the programme, as that had always been the custom with new members in our county society. Months passed, and I was assigned no place, and at last I lost all desire to become a contributor to the proceedings.

I found that the society, instead of being a fraternity bound together by a community of tastes, objects and needs, was divided into factions, each devising means to suppress the others; that there were a number of selfish, designing men who monopolized a large portion of the sessions in reading papers and reporting cases, evidently as a means of advertising themselves with the profession and the public generally; that these men would, whenever possible, insinuate a reporter into the hall, and in that way get themselves and their wonderful cases into the next day's papers. On the other hand, there were a few elderly members who were great sticklers for the Code, and who could smell a reporter as quickly as a terrier can a rat. The result was a perpetual conflict between these two elements, which was by no means agreeable, but, I am happy to be able to say, usually terminated in the reporters being incontinently "fired."

I soon learned, to my astonishment, that one could not place entire reliance upon the case reports presented; that some were greatly exaggerated and others manufactured "out of whole cloth," as the boys say.

I felt an unaccountable aversion to enter into the discussions, for there was something in the atmosphere of the meetings that oppressed and robbed me of the freedom that I have always heretofore enjoyed in medical meetings.

Under these circumstances I soon lost my interest in the society meetings and after awhile ceased to attend them, preferring to pass my time in my study or the laboratory.

You can imagine how great a loss I feel this to be, for the privilege of attending the weekly meetings of a medical society composed of the ablest men in the profession was one of the induce-

*From the *Cincinnati Lancet-Clinic*, Dec. 7, 1895.

ments that led me to seek a city location.

Another thing that caused me a severe disappointment was the reception I met with from those doctors from whom I had received the greatest manifestations of friendship. As soon as it became known that I had located in the city their demeanor toward me suddenly changed. They met me at the medical society and upon the streets with a coolness that contrasted strongly with their former warmth of manner. There were two or three especially, who had been most effusive in their manifestations of friendship, who were the first to show their indifference to me.

So far as I was personally concerned, I did not care for this in the least, for sycophancy as they had shown me never was to my taste; but it did distress and grieve me inexpressibly when it began to dawn upon me that the attentions I had received were not prompted by a spirit of friendship, but with an eye to my consultation business, and that the liberal profession of medicine had with them deteriorated to so mean and mercenary a level.

In every little party of doctors the conversation was sure to turn upon the superior opportunities and enjoyments of country doctors, until it became very irksome to me, and upon one such occasion I retorted that, since they were so well convinced of the superior advantages of country life, I knew of a most excellent location into which I would gladly introduce any one of them. "Now," I said, "do not all speak at once, for there is room there for but one." The arrow evidently hit the mark, for the conversation was changed.

The Code of Ethics evidently exerts a salutary influence in preventing men from attacking the personal character of each other, but it does not seem to extend its beneficence to medical colleges, and here almost everybody is attached in some way to a medical college, either as "professor" understapper, camp-follower or steerer, and from low to high they are all ready to cast opprobrium upon every other school than their own. It is common custom for such to denounce other colleges as "snide institutions," "diploma-mills," and "low-down affairs." One distinguished professor so

far forgot the ethics of his profession and the dignity of his position as to declare in a commencement oration that "there was but one medical college in the city" (of course that one was his own), and to explain the fact that they never rejected any one for graduation by the superior teaching ability of their faculty. How any one can reconcile such a thing with common decency, to say nothing of a high ethical conception, is hard to understand.

I soon perceived that the struggle for existence among colleges was as fierce and as bitter as between individuals, and that to be connected with one drew one into the fight without promising him very much of the prize-money; that it arrayed against him every one but those connected with the same school as himself, and even most of those were indifferent to his success or failure. I must say, however, that I greatly enjoy my college work, as the pleasure of imparting knowledge is one of the purest pleasures a generous mind can enjoy.

I soon realized that if I was to possess a practice I must build it up for myself, and I devoted myself more assiduously than ever to business; but I found it an uphill work, for I was not an adept in the methods that I saw in operation around me. I saw men practicing every possible trick to secure business—tricks that would be laughable if it were not so disgusting. The scheming that they resorted to to secure (free) advertising and case reports in the daily papers excited the sneers and contempt of the newspaper men, who look upon all advertising as legitimate, and that the one element of honor in it is to pay for it. Judging from the class of doctors they come in contact with, they conclude that the whole sentiment against medical advertising is downright hypocrisy, and they make their detestation of us felt upon every possible occasion.

Even men of high standing, and occupying dignified positions in the profession, so far forget themselves as to permit their portraits and biographical sketches to be published in the daily papers. This furnishes a justification to others low down in the professional scale, who are only too glad of a pretext to employ every advertising dodge possible.

Then, too, the fees here are so low that

one cannot hope to make a fair living without either slighting his cases or by working day and night and allowing no time for study and scientific pursuits. I am sure my fees at Hopkinsville were twice as high as here within the same area.

But the influences that act most perniciously are the free college dispensaries and hospitals, where thousands of patients are treated every year, a large proportion of whom ought to contribute to the support of the medical profession by paying for the services they receive, and the contract work. Almost every firm that employs a dozen men has its contract physician. The railroad, the street-car company, the fire company, the police force, the electric light plants, and every manufactory employ their physicians and surgeons, and if there is a manufactory that does not employ medical services for its employés it keeps them insured in one of the numerous companies that assume to furnish medical assistance in case of disablement, which services many times extend to the families as well as to the men.

Plenty of medical men can be found not only willing, but eager, for such contract work at a compensation that is ruinous. If the "Family Medical Supply Companies" that are now being projected succeed, and persons can secure medical services by the year for five or ten dollars, what will become of the profession God only knows.

It is inexplicable that men who have ability enough in other matters should be so short-sighted in business affairs. Do they not see that all these methods are death stabs at the business side of their profession, which, as a business, is bad enough now? Do they not see that traumatic surgery is dead, and that the only chance one not a contract surgeon has of securing a case is when some bum runs amuck of a "bung-starter" in some saloon? And do they not see that the family doctor is soon to take his turn on the toboggan-slide if things go on as they are going?

That physicians should cut the ground from under their own business interests by preventive medicine is certainly a noble and most commendable self-sacrifice, but that they should keep up free dispensaries, and by indiscriminate charities and a ruinous contract system re-

move "the prop that doth sustain the house," is an act of folly that is hard to account for.

In spite of these obstacles, I have slowly and painfully built up a little business that I hope will finally sustain me. I am, as you know, a man of few and simple wants, and can come as near living upon a straw a day as the Dutchman's horse, and I hope in this way to be able to continue in the path that I have laid out for myself. But I realize that it is too bad that members of a profession that contributes as much to the welfare of the race as ours should be reduced to such straits.

A bold and determined stand should be taken in these matters, and, first of all, every college dispensary should be closed, and the hospitals should see to it that only those entitled to it should obtain the benefit of those charities. When it is remembered that every hospital receives annually many thousands of dollars' worth of free medical services it appears but fair that they should see to it that their charities are not abused to the detriment of the profession that does so much for them.

It is said upon good authority that the medical profession does nine-tenths of the charity of the world, but if it only furnished free medical service for every hospital in the land, without thanks or appreciation, it should be entitled to some consideration.

It has been suggested as a remedy for contract practice that as many physicians as possible be enrolled as members of the medical societies; but it is, to me, the most discouraging feature of the case that many of the most conscienceless and unblushing practitioners of unprofessional methods, who resort to all kinds of underhanded methods, from newspaper advertising to "Family Medicine Supply Companies," the greediest medical vampires there are, are among the most active members of the medical societies. In fact, the medical society is but one of the many institutions which they pervert to their own avaricious designs. We cannot expect a stream to rise above its source, and we cannot expect the very men who use the medical societies to degrade medical practice to use the same societies to correct these abuses.

It appears to me that the medical pro-

fession is undergoing an evolution, and that just now it is passing through a transition stage, but what its future may be I am unable to predict. But this I know, that it makes it doubly hard for me here in this great and strange city, for I am an old-fashioned fellow, and cannot easily abandon my settled ideas as to what is dignified and high-toned and adopt the huckstering tricks that I see succeeding around me. I cannot at once abandon the high ideals that I formed in youth by association with yourself and others of the old school, who always held that the practice of medicine, although it has its business side, is something infinitely higher and nobler than any business on earth, and, whether I succeed or fail, I shall do it standing by those principles.

With kindest regards to all my Wood County friends, I am, as ever,

GEO. EWERSON.

I cannot express my feelings upon the receipt of this letter. Here was a man whom I loved as a son being crushed and his high possibilities arrested by conditions that are most befitting the vilest forms of quackery. I wrote to him at once, and exhorted him to stand by his integrity. "For," I said, "it matters nothing to the world or to the profession whether you fail or succeed, whether you live or die; but it matters everything whether or not you are driven from your lofty ideals of professional character. The wave of venality that is now sweeping over the profession will pass, and there will again arise a demand for great and pure men, great because pure and pure because great. *Stand by your integrity.*"

With this sentiment I will close this letter.

Yours fraternally,
A. RUSTICUS.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF SAMUEL M. WILSON, M. D.

Memorandum as to a New Use of Thyroid Fever.³

The effect of "thyroid feeding" and of ingestion of extracts of the thyroid gland has thus far attracted the attention of surgeons chiefly in relation to myxedema. So far as nutrition is concerned, the most obvious effects of this treatment in cases of myxedema are seen on the cutaneous envelope and its appendages. The dry skin covered with desquamating epidermis becomes soft and supple, the scales disappear, the patches of alopecia or the moth-eaten appearance of the hairy scalp also vanish, and the new growth of hair occurs; the twisted deformed nails grow out again with normal outline and symmetry. These facts naturally attracted the attention of dermatologists who soon began to apply the thyroid treatment to cases of psoriasis, xeroderma, lupus, etc. Dr. Jackson seems to think that the dangers outweigh the advantages in such cases. That is a point for the dermatologists to settle.

What concerns my argument is that in more than sixty-five per cent. of such cases an undoubted influence on the activity and nutrition of the skin was produced. This fact suggested a line of treatment in a case, which gave me some anxiety. In March 1894, a young girl dressing in front of a mirror in a train was thrown violently forward by the train suddenly stopping, and received a large crescentic wound in the soft tissues of the cheek. The concavity was upward. I saw her

within a few moments, and under anesthesia cleansed the wound surgically and brought it into position by interrupted sutures. Rapid union entirely by first intention, followed with a linear scar, neither depressed nor elevated.

In October 1894, she was again brought to Philadelphia to see me. The scar had become many times its former size, was elevated, irregular, with a broad, dense base, and was extremely conspicuous and disfiguring. During October, November and December various absorbent ointments, pressure by means of plaster, simple salves and other means of local treatment were employed, but without avail.

In January 1895, she again came to this city, and I put her upon thyroid extract, giving from two to four tablets daily, each tablet containing five grains. All local treatment was abandoned, the scar being covered only with a film of collodion to prevent abrasion or irritation and to keep up gentle pressure.

On several occasions marked elevation of temperature and quickening of pulse occurred, and once the symptoms in this regard were alarming. At all times there was a tendency to irregular and frequent heart action. In the course of a few weeks a perceptible change was noticed and at the end of about six weeks the scar had in almost its entire extent, come down to a level with the surrounding skin and the dense base had disappeared.

There are two possibilities that must preclude any positive conclusions from this single case. The scar may have been on the point of under-

³ J. William White, M. D., *University Medical Magazine*, August 1895.

going spontaneous involution, the collodion may have been an active factor in producing the result. The date of beginning of the atrophy, its subsequent variation with the dose of the thyroid extract, and the previous failure of well-applied pressure make these suppositions improbable. I report the case at any rate for the suggestion it leads to, of the trial of thyroid extract in conditions involving the skin intractable to operative surgery, and either on the border of malignancy like keloid or definitely malignant.

A Case of Acute Articular Rheumatism Complicated By Acute Endocarditis Followed by Gangrene of the Foot in a Child.¹

Mabel K., aged ten years, a healthy, well nourished child of good family history, was prostrated by an attack of acute inflammatory rheumatism. Examination showed swelling of the left knee, the skin of which was red and angry and the right hip was sore and stiff when moved. Temperature, 102.3°; pulse, 104; restlessness, the patient tossing to and fro and complaining of acute pain, especially in the knee. The following day the hip was the same, but the pain had subsided in the knee and was located in the ankle. Temperature, 102.5°; pulse, 108; tongue coated; bowels slightly constipated. Acute endocarditis ensued during the night. Pain over the cardiac region was complained of; a systolic murmur was heard at the aortic orifice, and the first and second sounds were somewhat muffled. A solution of digitalis, sodium salicylate and iodide of potassium was given, and Rochelle salt to relieve the constipation. Hot applications were applied over the region of the heart. The following day the pain in the cardiac region was greater; the pulse was 128, weak and thready; the murmurs more marked; the heart dulness increased in area; and the temperature, 103.5°. Stimulants in the form of eggs, milk, and brandy were ordered, and the digitalis mixture given every four hours. During the night the cardiac pain diminished, and the patient rested more comfortably, and the ankle, knee and hip seemed much improved.

The next morning a large blister was found covering the toes and extending as far back as the junction of the tarsal and metatarsal bones, excepting on the inner aspect of the foot, where it only reached the base of the great toe. An embolus from the inflamed valves must have lodged in the external plantar artery. Every effort was made to get rid of the embolus and, finding these unsuccessful, poultices were applied. The stimulants were increased, and instead of the digitalis, a mixture of iron, quinine, and strichnine given. Improvement now appearing, amputation was proposed but prevented by a relapse; then demarcation began with rapid separation of the slough. Healthy tissue extended to the bases of the toes and to the second joint of the great toe. The dead portions were clipped away, the toes at their metatarsal articulations. At the present time the foot has healed, excepting a small spot over the second and third toe, and the child is in good physical condition there only remaining some thickening of the aortic valves and a slight limp in walking.

¹ A. R. Allen, M. D., *University Medical Magazine*, August 1895.

Chronic Dyspepsia in Children.⁴

Childhood, especially boyhood, is a period when the digestive and assimilative powers are supposed to be at a maximum, when the capacity of taking food—and even that which can hardly be termed food—with impunity, seems to be almost unlimited, or when at most a sharp but transient attack of gastritis or gastro-enteritis with pain, diarrhea, and vomiting, seems to be the only penalty for even the most apparently outrageous violations of the ordinary laws of feeding. Digestive disturbances must necessarily be more important in their consequences during childhood, the period of development, than in adult life, for in the latter case adequate repair is alone interfered with; in the former, not repair only, but also growth. As all abnormal conditions in childhood are less localized than in adults, the intestines are generally affected along with and in the same way as the stomach, so that, though we speak as a rule of chronic gastric catarrh, it would be more correct to term it chronic gastro-enteritis. There is usually more than one factor of causation present, but I think that not in childhood only, but also in infancy and adult life, we do not lay sufficient stress on the influence of heredity as a very frequent predisposing cause. Even some babies will thrive upon what appears an eminently unsuitable diet, while others fail to digest even the most carefully selected and prepared food. The same differences only explicable by heredity or a congenital defect exist in childhood. A second great cause of dyspepsia in childhood even more potent than in adult life is town life and indoor life. Universal compulsory education, by keeping children together indoors from a very early age during the lightest hours of the day and often in badly ventilated buildings, must largely increase the prevalence of digestive disturbance. Much of the dyspepsia arising from these causes is, of course, a part merely of general debility and anemia; all the organs perform their functions badly and those of digestion are naturally as much affected as others. The third cause and certainly the great exciting one is improper feeding—irregular meals and odd things between meals, and an excess of carbohydrates, particularly potatoes. Like disorders of the respiratory mucous membrane, it commonly follows the acute specific fevers, particularly measles. The symptoms are both direct and reflex and differ widely from those met with in adults. The appetite is capricious and irregular; often a craving for unsuitable food and a distaste for the more wholesome varieties; hence follows wasting. Anorexia during the period of rapid growth causes more marked loss of flesh than in an adult. The child is usually pale, irritable, listless. The tongue often presents irregular patches of furred and over clean areas; the bowels are either costive or alternately costive and loose. The abdomen is usually distended, pain, referable either to the stomach or bowels, may be complained of, but is seldom severe in chronic cases. Among the reflex symptoms are: headache, especially in the morning; grinding of the teeth; night terrors; syncope attacks; a dry, hacking cough, and sometimes asthmatic symptoms.

⁴ J. Walter Carr, M. D., M. R. C. P., Lond., F. R. C. S., Eng.; *American Journal of the Medical Sciences*, December, 1895.

In the majority of cases the first point to attend to is regulation of the diet; food should be given at regular intervals, with nothing between meals. Tea, pastry, sweets, etc., should be forbidden, and very little potatoes given. An ordinary meal of fresh meat with abundance of green vegetables about noon, and for the other meals fresh fish, porridge, bread and butter, eggs, fruit and milk in abundance, as a food, may be ordered.

Of course some children have idiosyncrasies, but a child will not refuse wholesome food long enough to starve, simply because it cannot get sweets. A regular daily movement of the bowels is important, and almost every case will require a mild aperient. If there has been constipation one or two grains of calomel will be beneficial at first; otherwise, rhubarb and soda, or gray powder and soda should be given every other night. If either round or thread worms be present, a few doses of santonin may also be given before breakfast for three or four mornings. The child should be kept in the open air as much as possible, the presence of a cough being no hindrance. The uniform distribution of clothing over the body should be arranged.

A combination of seven grains of bicarbonate of soda, twenty minimis of tincture of rhubarb, and four minima each of tincture of nux vomica and spirits of chloroform may be given three times daily, half an hour before meals, to a child five years old, and if anaemia be marked, two grains of the citrate of iron and ammonium may be added to this dose.

A Case of Multiple Neuritis Due to a Long Bicycle Ride.

W., aged twenty-six years, accountant, of rather delicate physique, but in good health and of perfectly correct habits, rode fifty miles on a bicycle on August 31st. He usually rode short distances and this was his first long ride. The road was hilly and he got very hot and sweaty going up hills, and felt icy cold coasting down. Beyond the natural fatigue of such a journey, no special effects were felt for a week, when queer sensations were felt in the face but passed off. In a day or two slight numbness began in the hands, and involved the feet also. These symptoms became marked, the grip of the hands grew progressively weaker, moderate ataxia developed, and the faradic response became feeble but not lost. The diagnosis of multiple neuritis seemed clear, and no other explanation could be found for the occurrence of the disorder than the long ride. The patient passed from observation, being removed from the city.

Unilateral Ephydrosis of the Face.

Miss Jennie L., twenty-four years old, complained that, while eating, the right side of her face was always bathed in perspiration, while the left was usually dry. On examination I found behind her right ear, in the fossa retro maxillaris, a long, very deep and radiated scar, not parallel with the direction of the salivary duct, which remained after a periparotid abscess, which had been carelessly incised some years before. An attack of typhoid fever had caused swelling of

both parotid glands, the left terminating in resolution, and the right being incised discharged pus. The wound healed, leaving a scar in front of the right ear, and diminished sensibility to pain. This region was red and became covered with perspiration, particularly when she began to eat. The loss of sensation gradually diminished, but the tendency to redden and perspire remained.

A few seconds after food, particularly if acid, was placed in the mouth, a redness of the right ear began and spread forward and back until it reached the edge of the lower jaw. Over this surface beads of perspiration exuded and rolled down, producing a feeling of warmth. Chewing motions, electric irritation, and even the thought of tart food produced the same phenomena. On examining with Weber's circle the points were felt separately in the neighborhood of the right ear only. The tactile sensation of the circle was more acute on the right than the left cheek. The sensation of pain from a pin was less, but seemed greater behind the right than the left ear. Electro-cutaneous sensibility and electro-muscular contractility were the same upon both sides of the face. The right angle of the mouth was lowered and the right cheek puffed up, and the temperature of the right cheek higher than that of the left, and became much higher when perspiration took place. I employed atropine, potassium iodide, warm sea-baths, and galvanism, given repeatedly at intervals for many weeks. Several months later I met the patient, who stated that her general condition was improved and that the redness and perspiration had never reappeared.

A Case of Tetanus Neonatorum.

On November 24, 1894, a woman presented a baby for treatment. The child was ten days old, born of healthy parents who had had five healthy children. Three years ago she lost a baby, of nineteen months, from inward spasms and had lost boy a few hours after birth. He had not had convulsions, but could not open his mouth. The woman had been attended by a midwife, and labor was apparently normal. When five days old the child could not open her mouth to take the nipple and milk was forced into her mouth with a spoon, and some times, while being fed, the child would get red in the face and stiffen. The cord came off on the fourth day, leaving the naval red looking but not sore, but a few days later matter began oozing from it.

When seen the jaws were immovable, the forearms flexed, and a day or two later the thumbs were drawn into the palms and the fingers flexed over them. Convulsive motions of the toes and at times of the whole body were seen. The eyelids were closed and the forehead wrinkled, and all of these symptoms were increased by attempts to feed the child. At times the temperature rose to 104.5°.

A solution of bichloride was applied to the umbilicus; the bowels were opened with calomel. A half grain of chloral was given every two hours for two days; then the dose was doubled, and, two days later, two grains of bromide was added to each dose. Whiskey, in five-drop doses, was given every four hours. In fifteen days the child was cured.

⁵Frederick T. Simpson, M. D., *New York Medical Journal*, Dec. 14, 1895.

⁶A. Schirman, M. D., *New York Medical Journal*, Dec. 14, 1895.

⁷Walter Leslie Carr, M. D. *Archives of Pediatrics*. November, 1895.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

HYGIENE.**Domestic Filtration of Water.**

The purity of water at the present day must be judged by its freedom from micro-organisms, and the criteria adopted by hygienists and sanitary authorities should be based upon such considerations. As an ideal pure water is therefore one which is absolutely sterile, it is necessary to consider how much sterility can be readily and safely acquired. At present the householder must rely on his own exertions for affecting this object, since attempts at bacteriological purification made by the larger towns and water supply companies have been shown over and over again to be useless in cases of epidemics, and can only be regarded as precautionary measures which should be rendered as efficient as a first line of defense can be made. The purity of a domestic supply can be obtained by two different methods, viz., either by sterilizing the water with heat or by using some form of gieser which shall retard the passage of all the micro-organisms present. The apparatus for sterilizing by heat, or "sterilisateurs," as they are called on the Continent, are rapidly becoming more generally known, and the better forms are admirably adapted for the supply of sterile water to hospitals and public institutions, while country houses seem also to be indicated. In dealing with the alternative method we have, however, to insist on the absolute necessity for householders to be on their guard against relying on the efficiency of the majority of household filters when tested from the bacteriological point of view.

Dr. Sims Woodhead and Cartwright Wood a few months ago gave an admirable review of the merits and demerits of the various filters which find favor in this country, and from their systematic examination of these filters have come to the important conclusion that only those of the candle type, of which the Berkefeld and Pasteur Chamberland filters are the best known, fulfill modern conditions of efficiency. Unfortunately hitherto these filters have only been of practical service when adapted to a high pressure of water, since their rate of filtration is so extremely slow under ordinary conditions as to practically negative their use. The rival claims of these two forms of candle filters have been critically discussed by Dr. H. H. Johnston, who, in a thesis for the degree of Doctor of Science of Edinburgh University last year, described a series of experiments to decide this point. His general conclusions are worth quoting: "The Pasteur Chamberland filter is the best and the only one on which reliance can be placed for permanently sterilizing water. Its use is therefore recommended for sterilizing drinking water, water used for surgical dressings, and wherever sterilized water is required for any particular purpose."

In France for many years past this form of filter has been used in the French Army, and General Zuremden, in his detailed report, draws attention

to the fact that a decrease in the death-rate of the French Army from epidemic disease can be directly traced to the adoption of this method for purifying the drinking supply. Dr. Vallen, in an examination of the typhoid epidemic which occurred in Paris in 1894, also showed that this epidemic was confined to those barracks which were not supplied with Pasteur filters, while those which had these appliances, even with exceptionally bad water, remained unattacked. Within the last few weeks the authorities at Darjeeling, in India, have decided upon filtering the whole of the water supply of that town upon this plan, and this installation will be one of the first in which the Pasteur Chamberland system has been adopted on a large scale.

The drawback which, we have already pointed out, existed in the use of these filters for household purposes, has also been recently removed, as the proprietors have now placed on the market a household filter which works without a high pressure or head of water. In this domestic form, which we have had an opportunity of examining, a battery of three candles is employed, and these are connected by a special India-rubber communicating tube, with a siphon tube to the receptacle below. The three candles being immersed in a vessel charged with the unfiltered water commence to act slowly, and the filtered and sterile water syphons over at the rate of one or two pints per hour. A constant supply of pure drinking water can thus be readily obtained in any house without any greater trouble than that of recharging the reservoir from time to time. From our examination of this new model, we are of the opinion that it fulfills the conditions laid down by the bacteriologists, and is at the present time practically the only form of domestic filter which the profession can recommend to the public.—*The Hospital.*

NEWS AND MISCELLANY.

A California Excursion of Business and Professional Men will leave Chicago and St. Paul Thursday, January 2, and February 6, 1896, in Pullman Tourist Sleeping Cars, over the Chicago, Milwaukee & St. Paul, the Union Pacific and the Southern Pacific Railways, via Omaha and Ogden, for Sacramento, San Francisco, San Jose, Monterey, Los Angles and the Fruit Districts of California. Best of company; lowest possible Tourist rates; Tourist Sleeper—double berth (room for two persons)—from Chicago or St. Paul to San Francisco, \$6.00. If you are going as a tourist, or to settle in California, take this train, and you will have the best of company and comfort. Sleeping Car berths should be engaged at once. Send orders for berth, with cash, to F. H. Thorn, City Ticket Agent C. M. & St. P. Ry., 365 Robert street, St. Paul, Minn., or C. N. Souther, City Ticket Agent of C. M. & St. P. Ry., 95 Adams street, Chicago, Ill.

For particulars and circulars apply to nearest Ticket Agent, or address S. Sherin, Excursion Manager, Palmer House, Chicago, Ill.